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Mrs. Constance B. Tuttle



DON'T.

APPLIED TO CERTAIN TERMS IN MU-
SICAL THEORY THAT SEEM TO THE
WRITER TO BE INCORRECTLY USED
OR DEFINED. : : : : : : : : : :

BY

GEO. F. ROOT.



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DON'T.

A FRIENDLY ATTEMPT TO CORRECT SOME
PREVALENT ERRORS IN MUSICAL
TERMINOLOGY.

Constance Barlow-Smith

BY

GEO. F. ROOT.




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EXPLANATORY.

THE humorous protest which is the title of this book has been applied with a good deal of effect to some common rhetorical and grammatical errors, and I am wondering if I shall be thought presuming if I apply it to some common musical ones.

If it is thought that I am taking too much upon myself in assuming the right to utter this significant word to my neighbors, I can only say that I take great interest in the subject, and that there is great need that something be done. Furthermore, I promise to welcome every "don't" which may be applied to my work, and will give each a candid and careful consideration, for I am in entire accord with what a great man means who says: "With consistency an honest man has simply nothing to do; what he says to-day he may see to be wrong and unsay to-morrow. To shut his eyes to the truth or continue in the wrong for the sake of being *consistent* is the height of folly."

What I am most anxious for is an agreement among musicians as to exactly what our well-known musical terms shall mean and our musical signs indicate, so that they shall not be mixed and confused in their meanings, one with another, in people's minds.

It is plain that no term in our science should be applied to two or more things in a conflicting or confusing way, since each thing has its own name which describes it clearly without conflict or confusion, and it is equally plain that no musical sign should be said to do what it does not do, or represent what it does not represent; and yet such is the loose and random way in which statements are made and terms applied that these things are done all the time.

There are a good many *couples* in our science that are in this danger, and the question is, is anything gained by giving to one the meaning that belongs to the other? That much is lost in clearness and logical accuracy by doing so is certain.

Here are some of the couples: "Measure and Bar," "Tone and Note," "Key and Scale," "Time and Measure," "Degree and Tone," "Degree and

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Note," "Interval and Tone"; yes, in an important work which I have on my list the term "interval" is applied to single tones. Then there are several single terms often used with wrong meaning, and some, like "letters" and "numbers," are used that have no place in the science at all. (While we do not use letters nor numbers, we do use some of their names.)

Corresponding with a prominent musician in the East on his misuse of elementary terms in an important work that he is publishing, he says: "I must use terms and language that will be understood." I reply: "Would not 'the third note in the third measure' be just as well understood as 'the third note in the third bar,' and 'the first tone of the scale' be just as well understood as 'the first *degree* of the scale,' and would there be any trouble with 'tonic and dominant of the key, instead of 'tonic and dominant of the *scale*,' and, 'what was the pitch of that *tone*?' instead of 'what was the pitch of that *note*?' and 'double measure' instead of 'double *time*,' and 'sing the first tone,' instead of 'sing the first *letter or number*?'"

I then added: "The trouble in using the right terms would not be with your students, but with yourself. You have been so long accustomed to this picturesque way of applying terms that to be exact in their use would probably give you more trouble than you would care to take; but if prominent musicians would take hold and look into the matter we should have more hope of ultimate success."

I shall criticise his work in what follows.

That I wish my readers to think my criticisms reasonable and just goes without saying, but to give myself the best chance for such a result I must make sure, to begin with, that we stand on common ground in some important things. First, about the nature and limitations of technical terms. Let me state briefly the law in regard to them.

In every science, art, and occupation are words taken from their common meanings, so to speak, and special or technical meanings given to them. Sometimes technical meanings are similar to common meanings, but often quite different; indeed, some of our technical terms have not a particle of their common meanings in their true musical use. "Accidental" and "Natural" are two of the most conspicuous terms of this kind. It is self-evident that if such terms are thought of in music with their common meanings, confusion and trouble will follow.

It would be interesting, if there were room here, to go through our musical terms and see which of them are used with their common meanings, which vary more or less from their common meanings, and which have nothing of their common meanings in the minds of those who use them correctly.

Second, why should the simple terms of our science get into this disorder and stay so, year after year, and generation after generation, when it is not

so with any other science? First, because, unlike any other science, art in music is not only entirely separate from its theory, but is not in the least dependent upon it. A man may conduct like a Thomas, or play like a Paderewski, or sing like an angel, while saying "a sharp raises a note a half a tone," "with five lines there are but four spaces," or any other common absurdity. His musical terms, correct or incorrect, have little or nothing to do with his performance.

Still, those who have the wrong meanings of any of our musical terms in mind are in more or less perplexity and trouble when they have occasion to use them in teaching or explanation, for they can not make the meanings, as they understand them, accord with the facts of the science. Therefore a second reason for errors comes in some cases from an honest effort, though from mistaken premises, to *improve* our nomenclature, and the mistaken premises come from supposing that the wrong meanings of certain musical terms are *intended*. For example:

A man thinks that "natural" in music is *intended* to mean that one character or one key has more *naturalness* than another; that tones not represented by the aid of flats or sharps are more *natural*, and that lines and spaces without flats or sharps are in a similar condition. He knows that meaning is wrong, but instead of getting fully hold of the technical meaning of the word himself, and then laboring to have others understand it, he proposes another term. This has been done in the case of this word three times in my remembrance of more than fifty years. That no word has been found which answers the purpose so well as "natural" I think I can show.

A third reason for new errors, and the perpetuation of some already started, is the desire for novelty, the wish to say or do something new to attract attention and create interest. I have nothing to say against that desire if it does not proceed from vanity or conceit. I believe in a good novelty; but may an old man say a plain word to those who are coming on to teach, and perhaps to make books? Is there not danger of beginning *too soon* to "improve" our system? Look back. Do we not all recall some things that we have said or taught or written musically that we now see are wrong and wish we had omitted? Judge the present by the past. Keep the mind unprejudiced and open and you may find that some things that you are saying and doing now are wrong. If so, remember that the progressive man changes his mind as occasion requires, and that no one loses in the estimation of his fellowmen by acknowledging his errors.

In regard to the advent of new terms into our system and new statements of its truths, time only will show whether they have come to stay. Some that all admit are good find it hard to get a foothold on account of the secondary nature of the subject and the small importance which is attached to it

by musicians. Others that are not improvements have perhaps a temporary success and then pass away. It is light and knowledge only that will sift the wheat from the chaff and get us at last on to a basis where our science can hold up its head with other sciences now more logical and accurate.

With these preliminary explanations will my readers please imagine a "Don't" prefixed to each of the quotations that here follow? All will be from books or other printed utterances of those who assume to guide people in musical matters. No authors' names will be given, as that might rouse antagonisms, and cause some to feel that having said a thing they must defend it, right or wrong. I hope all will see that my desire is to help and not antagonize, for that is certainly my feeling.

The "Don'ts" may be imagined of various grades: some in "large caps," some in "small caps," some in "italics," some in "lower case," and some in smaller type, each indicating the amount of emphasis with which the word is uttered.

G. F. R.



“DON'T.”

(FROM THE WRITER'S STANDPOINT.)

(The objectionable statements are in the smaller type, the criticisms in the larger.)

No. 1. THE STAFF.

The staff consists of five lines and the spaces between them. Each line and space is called a DEGREE, making nine degrees, numbered from lowest to highest.

When more than nine degrees are wanted, short lines above and below the staff are used, called added lines.

HOW the wrong idea of the staff leads into contradictions! According to the above, the next degree above the fifth line is the first added line. The space between those two lines is ignored. Does the staff ever begin and end with a line? that is, is a line the first place on which a note can be written?

How much simpler and truer is the idea that with five lines there are six available spaces, and if more are wanted *the staff is enlarged.*

The staff usually consists of five lines and four spaces. Short added lines are used to represent tones which are too high or too low to be represented on the staff.

does not think of across the street or up to the sky, but of the technical or special meaning of that word in its musical use.

Now, it is self-evident that the definitions of music should not only agree with the *usages* of musicians, but should be founded upon them, for actions speak louder than words—or definitions. If musicians *use* but four spaces with five lines, then the statement that the staff has but four spaces is true; but if musicians use six spaces before the staff is enlarged, that statement is not true.

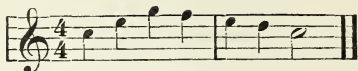
The trouble in this matter seems to come from considering that a space can not be a musical space unless it is inclosed by two lines; but how that view can be held in the face of universal usage is unaccountable. Why, the very man who says the staff has but four spaces not only uses six, but he names the outer spaces—one, the space above the fifth line, and the other the space below the first. How they can be ignored after that, is inconceivable. But perhaps he is in the way of thinking that somehow “space above” means above the staff, in the sense of being out of it—not belonging to it. That is still more inconceivable, for a “line” or “space” is only such by virtue of being a part of a staff, the staff being a combination of lines and spaces, which combination includes all that are being used. A line or space does not “go off and flock alone,” as Lord Dundreary used to say. Let me illustrate :

If a note were put upon the old man’s walking-stick it would be on a *staff*, but it would not be on the musical staff. If a note were put *above the staff*, thus :



it would be on *space*, but not on musical space. It would not be on the staff at all. It would really be above the staff.

But here the note is on one of its most familiar and constantly used spaces.



But how large is this outer space? Just as large as the inner spaces, and no larger—just large enough to write a note upon. All beyond that is not musical space, but common space. Some of that common space, however, becomes musical space as the staff is enlarged. Every short line adds one of those outer spaces. There is a space *above* every line which is inseparable from it; there is a space *below* every line which is inseparable from it; therefore a staff of any size *begins and ends with a space*, and not with a line.

It seems to me if the friends would only see that these outer spaces, whether made by the long lines or the short ones, are just as real, just as simple, just as good, and just as available as the inner ones they would allow them to be counted in, and our difficulties would vanish.

Now about naming the lines and spaces (degrees) of the staff: The staff is a variable character as to size. It always has five lines and six spaces, but it often has six lines and seven spaces, seven lines and eight spaces, eight lines and nine spaces, and so on. But there should be no variable-ness in *naming*. That should be fixed, and not in the least dependent upon the varying size of the staff. “First line” should always be as it now is, the first line of the permanent staff, or the first long line. “First line above” always the first short line upward (omitting the word “added” as superfluous, and using the word “above” simply to show the direction in which the staff is being enlarged), “first line below” the first short line downward, etc.; and now if “first space” could be the name of the first space of the permanent staff, or the first long space, and “first space above” could be the

name of the first short space upward, one of the objects of this agitation would be accomplished.

There are two errors, or contradictions between facts and definitions, which are the reasons and the excuses (if any are needed) for this agitation. One is *saying* four spaces and *using* six; the other is, calling the second space of the permanent staff the first, and the first added space the second. Both these errors would be remedied by squaring definitions and statements with the facts. What if it makes some trouble and confusion to do that (no reform was ever wrought without inconvenience to somebody), isn't it worth while to take some trouble to make our science more logical and true?

In conversation with one of our most intelligent musicians on this subject lately, he said: "The common concept of musical people is that the line must be the boundary of the staff; that the space is too vague to be a boundary." He smiled as he gave voice to this common error, for he saw how the facts were against him. I replied that if that strip of space just above the fifth line was definite enough to write a note upon, and to put the sharp of a signature upon, it was definite enough for a boundary; at all events, that it was more definite than the boundary of many a prairie tract of land before the fence was put up. The owner finds his boundary, perhaps with some trouble, and then puts his fence on it. The fence does not make the boundary: it was there before. Just so with that strip of space just above the fifth line. It has its boundary perfectly well defined (which boundary is the boundary of the five-line staff), and when we wish to enlarge the staff we put a fence on that boundary, which fence incloses that space and brings in another strip of space which then becomes the boundary of the enlarged staff. for the law of this musical field is that there shall be a strip of space outside of every fence which shall belong to it, and so be a part of the field.

As well might one say there can be no field, or that nothing can be produced by it unless it is inclosed, as to say there is no musical space, or it can not represent anything unless it is inclosed. The constant and universal usage of musicians disproves that. The outer spaces of the staff are used just as the inner ones are, and, although unincluded, they are never undefined—their "boundary" is as clear as if a fence (line) were there.

Let this subject be approached by a mind not already preoccupied by the common definition, and the new view will seem not only simple and in accordance with the facts, but any other will seem out of the question. Surely no one would insist upon the old definition because it has been held many years, or even because of its general acceptance. That would bar all progress. I remember well when it was universal to say "A sharp raises a note a half a tone." We are pretty well over that now, but progress in these matters is slow because they are not vital to singing or playing. If they were, they would be righted in short order.

In regard to the added degrees not belonging to the staff, this may help: There are extant very old music-books in which the staff has but three lines. I have seen one. After a while it was found that three lines were not enough, so they added another. The science did not, however, say "this new line does not belong to the staff—we will use it when we want it, but it is not a part of the staff." No; it took a far simpler way. It said we will have a staff of four lines, and there were books with four-line staves. It was soon found, however, that another line was wanted, and again science did the obvious and simple thing. It did not say "we must have this line, but our staff has had but four lines, and we will not consider this line as a part of the staff." No; it said the staff now has five lines. And

still the process went on. It was found that five lines were not enough; but, on experimenting, a new condition came up. It was found that more than five long lines would confuse the eye, so the enlarging was done by short lines, and it was soon found that while the five long lines must always be printed, even though some of them were not used, there was no need of printing the short lines unless they were wanted. Now, what do science and analogy say? "We need to enlarge the staff, but we add something to it that does not belong to it"; or do they say we need a larger staff, and we enlarge it? Which is contradictory and illogical, and which is straightforward and simple?

When the staff had three lines, that extra line could have been a short one, printed or written only when needed; or, when the staff had four lines, the fifth could have been an occasional one; but it was not necessary then to use short lines; the eye could locate a note at a glance anywhere on a four- or five-line staff, but beyond that there would be trouble; otherwise I am confident our staff would contain more than five long lines instead of our being obliged to enlarge, as we do now, by short ones.

But to return. Say to one whose opinions are not fixed on this subject, "There is nothing in the nature of the case that compels the staff to have a certain number of lines. It may have three, four, five, six, seven, eight, or any number; but in order to have as few lines as possible, musicians use the spaces between the lines and the space just above the upper line and the one just below the lower. With five lines there are therefore six spaces, which are made by the lines, are closely connected with them, and belong to them. The fact that the outer spaces have lines only on one side of them makes no difference in their use. In fact, they are easier to recognize than the inner spaces, because no calculation is required to locate them. These

lines and spaces are always grouped together, and form the five-line, or permanent, staff. Begin at the middle line and write notes upward, and when you have gone as far as you can, that is, when you have placed a note on the highest place on which a note can be properly written, you have reached the limit of the staff in that direction. Begin at the middle line and write downward as far as you can, and your last note will show you the limit of the staff in that direction. If you wish to write more notes in either direction you have to enlarge the staff."

The above, I am confident, would appeal to such a person as I have described as less conflicting and more sensible than this: "Write upward from the middle line, and when you get to the fifth line, that is as far as you can go on the staff, you *can* put a note on the space next above the fifth line, but that is outside; it does not belong with the others. You can not write the scale of G on the staff. The only scales that can go on the staff are E and F (using the treble clef). In all other scales some notes have to be written on something that is not the staff."

How the clear mind of a child, or of a thoughtful student, must be troubled by such statements, if he thinks at all. He sees that certain long lines and spaces are always there, and that others—short ones—are added only when they are wanted; but he can not see why two of the long spaces that are always with the long lines should be classed and numbered with the short added ones. But he supposes that it must be right if the book and teacher say so, and as he finds he can sing just as well, whether he says one thing or the other, he does not trouble himself, but allows illogical and confused thought about the matter to stay in his mind.

I am often reminded, when thinking on this subject, of a conversation I once had with a dear old friend who has made some of the best and most popular music-books ever

published in this country. I began: "In our system of notation is a note ever written on anything but a line or a space?" He promptly answered "No." "Then, wherever in a piece of music we see a note, there is a line or space?" "Certainly." "Are the lines and spaces on which notes are written all alike?" "No; some are long and some are short." "Have you any objection to this statement—'Some are long and permanent, and some are short and occasional?'" "No, I've no objection to that, it is true." "If a note is written on the space just above the fifth line, is it on a long permanent space, or is it on a short occasional one?" "Why, a long permanent one, of course." "Well, then, why not count it in with the other permanent spaces?" His answer was a very common one in these discussions. It was to the effect that he would not change his views, "for," he added, "I can't recede from the stand I have taken for years on this subject in my books and teachings." I did not quote Emerson's famous saying about *consistency* (see Preface), but it would have been appropriate. (*Read No. 36 in this connection.*)

Let me say, at the outset of these articles, that "a little theory and a great deal of practice" should, of course, be the teacher's motto while at his work. Much talk about terms or definitions, or theories, then, is most objectionable. I only contend that the right terms are as brief, as easily spoken, and more readily understood than the wrong ones, and that they should be used where it is possible without explanation or comment. It is only where teachers are conferring together, as in this work, that discussions and explanations are profitable.

No. 2. THE STAFF AND PITCH NAMES.

The first seven letters of the alphabet are used in naming the degrees of the staff. By these letters the absolute pitch of the tone is determined.

The arrangement of letters upon the staff is determined by characters called *clefs*, of which three are used in this book.

The sharps and flats in the signatures mean that the letters upon which they are placed must be played or sung sharp or flat. When there are two sharps in the signature every F and C must be played or sung sharp, because the sharps in the signature are upon the lines and spaces whose alphabetical names are F and C.

WHEN I first began to take special notice of our musical terms and definitions I thought, where errors in them were *very* plain, that I could make everybody join me in “a more excellent way;” if we could find one; but I soon found that when a teacher was deeply interested in making his class play or sing well he didn't care much about the phraseology in which he gave his directions. If his pupils understood what was wanted, and *did* the right thing with fingers or voice, he was satisfied, and so were they and their friends—most of them.

Now and then some critic would say: “What an illogical set these musical people are, as to their theory, using wrong, sometimes absurd, terms, when the right ones are just as well known and just as easily spoken.” To which the teacher might have responded: “Do not my pupils read readily and play (or sing) well?” and the answer being “yes,” he might have added: “Well, what more do you want? Are not good music and a ready reading of it the main things?” To this there can be but one answer: They are the main things; and to the main objects of our art, popular attention will always be turned.

Then why trouble about the wrong use of terms if they do not interfere with good singing, or playing, or composing, or conducting, and “nobody cares”? Well, an error is an

error, although it may be in a subordinate department of the subject, and there are people who do care. Is it nothing to have our terms "loose" and "illogical," and to be so regarded by scientists in other departments of education?

"Well, give a specimen of the errors to which are applied such disagreeable terms." Willingly. Unfortunately they are only too plenty. Perhaps a good way will be to quote from a recent lesson by a member of one of our Teachers' Clubs.

The young man who was acting as teacher, standing before the blackboard, pointed to the first line of the Treble Staff and asked, "What letter is this?" to which there came a prompt answer: "It isn't a letter at all; it is a line."

"Well, what letter does it stand for?"

"It doesn't stand for any letter; it stands for the pitch of a tone."

"Well, what letter is the tone?"

"It isn't any letter; a letter and a tone are two different things. To be sure, the tone that the first line represents has the same name that a certain letter has."

"Well, isn't that the same thing?"

In answer, I hold up a small door-key that I happen to have in my pocket, and ask, "What is this?" "A key," is the answer.

"Do we use this article in music?"

"No."

"What about it do we use?"

"Its name."

"Does the name 'key,' when used in music, have any reference to this little brass instrument?"

"None at all."

"What does it mean in music?"

"A family of tones."

"You observe, then, first, that this key which I hold up

before you, and its *name* are *two* entirely different things; second, that the name may be taken away, so to speak, from this article, and applied to something widely different from it. So it is with letters. A letter and its name are two as different things as a key and its name are. We no more use letters in pitch representations than we do brass keys. We use the *names* of certain letters to name things as different from letters as a ‘family of tones’ is different from the little instrument with which you unlock your door when you come in late at night, and do not wish to disturb the family.”

When the smile had subsided, the young man turned to the board again and said: “What should I have asked?”

“That depends upon what you wanted to know. If, when you pointed to the first line, you merely wanted its name, that would be one thing; if you wanted to know what it stands for or represents, that would be quite another.”

“Well, the first line is named E, any way.”

Here a smile goes round the class, and I say: “No; if it is named E, put the Base Clef on the staff and it must be named G. Sharp, flat, double sharp, or double flat it, and it must have other names. No, that line has but *one name*, and that it has under all possible circumstances, with or without clef, sharp, flat, natural, or accidental of any kind.”

“Well, what has that line to do with the letter E?”

“Nothing.”

“Well, with the name E, then? It seems to me you are splitting hairs.”

“You call it a hair? Why, it’s a good-sized log—one that will roll into your path and impede your progress in a good many ways. Let us split it, then it won’t roll, and you can use its two sides in an orderly way. Class, what does this name that we are talking about, name in the alphabet?”

“A letter.”

“Something to see, or something to hear?”

“Something to see.”

“What does this name name in music?”

“The pitch of a tone.”

“Something to see, or something to hear?”

“Something to hear.”

“What connection, then, has the first line of the treble staff with the name that has given us so much trouble?”

“The thing named ‘first line’ (something to see) stands for the thing named E (something to hear).”

“That is it; isn’t that simple enough?”

Then the young man says: “I see; I ought to have asked the name of the line, and then what it stands for or represents; but I am sure I have seen in a Musical Catechism something like this: ‘How many letters of the alphabet are used to represent musical tones? *Seven*. What are their names? *A, B, C, D, E, F, and G.*’”

“Well, what remark would you make on that statement now?”

“Why, I see that lines and spaces, and not letters, represent the pitches.”

“Perhaps the author meant to ask how many and what letters of the alphabet are used to *name* musical tones?”

“Even then he would not be right; for the letters themselves are not used at all; and is it right to say ‘musical tones’?”

“Well, the word ‘musical’ is unnecessary there. A tone is a musical sound, and in a dictionary or catechism every statement should be exactly right.”

There is one thing that we have to do all the time in this “letter” business which prevents people from seeing readily the fact that the letter and its name are two different things. It is this: When we have occasion to *write* or *print* the name of a pitch represented by the first line, treble staff, we *use a*

letter. For instance, I write or print this statement: "The pitch represented by the first line of the treble staff is E." There, doesn't that look as though we used letters in music? The first thought is "yes"; but look a little deeper; that "E," so used above, is *not the name of a letter*—it has nothing to do with the alphabet or with language—it is the name of a tone.

When we write or print the name given to "a family of tones" we do not have to use the brass instrument—we have the *word* "key." But in the other case we have no word, but have to take the letter itself to name something which is not a letter.

Give the letter (fixed) names of the degrees of the Bass Clef Staff.

Give the names of the pitches that the degrees of the Base Staff *represent*, is the right phraseology. The writer of the above does not seem to see the distinction between the name of a thing and its office. The *names* of lines and spaces are never anything but "first, second, third," etc; what they *represent* is a different matter. I can not object to the word "Bass" for "Base," because it is so extensively used, but the latter name, as indicating the *foundation* or *support* of the harmony seems to me preferable.

In an answer which soon follows the above, occurs this phrase: "*If the letter has been previously flatted.*"

Since letters are not used, they can not, of course, be flatted. Lines and spaces are the only characters affected by sharps and flats. (See No. 14.)

What fixed names do we apply to the degrees of the staff? *The names of the first seven letters of the alphabet.*

The letter names here referred to do not apply to anything *to see* in music, but only to tone pitches, *something to hear*. In my blind class, many years ago, in New York city, there were several who, when I touched any key upon the piano

and called for the name of its pitch, would respond promptly, "E," "D," "F-sharp," "B-flat," or whatever the tone might be. Their answers were right, but they saw nothing. If I asked: "What is the name of the sign to seeing persons of this pitch E?" they would answer promptly: "First line of Treble Staff." If I had asked them if the name of that line was E, I am quite sure they would have answered "No," for they perfectly understood that if it was ever named E, it would sometimes have to be named E-sharp, sometimes E-flat, and sometimes E double-flat, and changing the clef, G, or G-sharp, or G-flat, etc.

Observe the difference between the *name* of a thing and its *office*. The office of the thing named "first line" (something to see) is to stand for or represent to the eye the thing called E (something to hear).

Under the head of "Absolute Names" this writer goes on:

As we have just been reading the scale, what is the syllable name of the first line of the staff? "Sol."

No line of the staff has a syllable name or a letter name. The only *name* that line has is given in the question, "first line." It, the *first line*, may be made to *represent* the tone "E," sung to the syllable "Sol," but the name of the line is neither E nor Sol.

Every time we change the position of the scale we change the names of the degrees.

Wrong. The *names* of lines and spaces never change, and they are the only "degrees" in our system of notation.

What degrees of the staff represent the pitch "A"?

Here "degrees" means a line and space, and is used correctly.

In another place he speaks of degrees as having *relative* names.

There are no such things as relative lines and spaces, although they are constantly made to *represent* both absolute and relative tone pitches.

Second, it is as plainly demonstrated that our musical alphabet of seven letters is incomplete. There being more tones than letters within the limits of one octave, it is only reasonable that there should be as many letters as there are tones within such limits.

There is no "alphabet" in music. "Alphabet" is the name of something of great importance in another science. It is not composed of tones, but of letters. That which may be said to correspond in our science to the alphabet in language has its own name. There is no need of borrowing.



No. 3. DEGREES.

How many degrees of pitch did we sing? *Two degrees.*

THE word "degrees" has no place here. As well might one say: "How many degrees of length did we sing?" There are different lengths in music, and different pitches. A "quarter" is one length, a "half" is another. C, or one, is one pitch. D, or two, is another. "Sing a quarter, sing a half." "Sing one, sing two." The latter phraseology is simple, sensible, and scientific; the other is not.

Farther on this error becomes more apparent.

What degree of pitch seems to make the best ending?

"What pitch, or what tone, makes the best ending?" is the right question.

Using the absolute names, what degrees did we sing?

We do not sing *degrees*; we sing *tones*. The word "degree" has but one meaning as a technical term in music,

viz. : A line or space of the staff. Notes are not degrees; tones are not degrees; lengths are not degrees; pitches are not degrees; powers are not degrees; qualities are not degrees; intervals are not degrees. All those things have their own names, and it is worse than unnecessary to call them degrees.

What degree of pitch do we sing when G is the home tone that we do not sing—when C is the home tone? *F-sharp*.

Why it should be "degree of pitch" here, and "tone" (the right word) in another question near by, is not evident, for both mean the same pitch, F-sharp; but F-sharp may be, and often is, sung as a chromatic tone, when C is key tone. But why should "degree" come in there, when "what pitch do we sing," or "what tone do we sing," is so unmistakably clear and direct?

Intermediate tones take their names from the names of the degrees by which they are represented.

No. The degrees by which they are represented have no other names than "first space," "first line;" "second space," "second line;" etc. These degrees, by the aid of accidentals, *represent* the intermediate pitches, but the pitches do not take the names of the degrees. The pitches are named absolutely by such names as "C-sharp," "D-flat," etc., and relatively by such names as "sharp one," "flat two," etc.

First degree of power, second degree of power, third degree of power, etc., meaning pp., p., m., etc.

To say that "mezzo" is a degree of power is as unnecessary as to say that C is a degree of pitch, or a quarter is a degree of length. Mezzo is a power; C is a pitch. The word "degree" is superfluous in both cases. That classification of powers is not only arbitrary, but lacks the clearness and directness of the usual form. To say that "the third

degree of power is 'mezzo'" is not nearly so simple and clear as "a medium power is called 'mezzo,' a loud power 'forte,' a soft power 'piano,'" etc.



No. 4. BEATS AND MEASURES.

We measure the lengths of tones by a division of time into equal portions. The portions into which time is divided are called measures. Measures are divided into smaller portions, called parts of measures, thus: One, two, one, two, one, two, etc.

WE do not make measures and put music into them. We make music, and it induces the mental pulsations, which are the real beats of music, and these beats, as they flow, group themselves into measures. Beats may be manifested by motions of the hand, or by counting. The question of how much time is taken is not thought of.

A measure is a portion of time represented between two bars. A measure is divided into parts: "Two-part measure," "Three-part measure," etc. A measure is a combination of strong and weak parts, etc.

It takes time to do anything, but a measure is no more a portion of time than a scale is.

Here are the facts with regard to measures: When persons hear music that they comprehend, in other words, that is tuneful and enjoyable to them, they are conscious of its causing something like regular mental pulsations that keep with the music, and with which they are often inclined to "keep time," as the saying is, by making motions of the head, foot, or hand. These mental pulsations are the real beats of music. It is true the extensions of the beats out into the hand are also called beats; but the hand no more "keeps the time" than the hands of the watch in its sense. We observe while hearing music that the beats are not all alike; some regularly recurring are more prominent than the

others; these are called accented beats, the others unaccented beats.

Music makes its beats go in groups by means of the regularly recurring accented beats. When music is of such a nature that it makes its beats group themselves into *twos* (an accented and an unaccented beat), it is said to be "double measure"; when in *threes* (an accented followed by two unaccented beats), in "triple measure"; and so on.

Measures are, therefore, "groups of beats." "Portions of time" would be a very unsatisfactory description of what makes measure; and "equal portions of time" would not be true, for in almost all music the beats may in places be accelerated or retarded, or there may be a pause; but the measure is always "a group of beats."

Accented and unaccented beats, and the measures they make, whether only *felt*, or whether at the same time manifested by hand or baton, form the steady, unchanging foundation for all the rhythmic variation and beauty of music caused by conflicting accents, such as syncopations, etc.

It is quite true that the measure is represented by the space between two bars, and that the representation of the measure is also called a measure.

Those who may be inclined to use the names "Two-part measure, three-part measure," etc., instead of "double, triple," etc., are asked to consider the following reasons for *not* doing so: Measures consist of *beats*, therefore if new names *were* wanted, *two-beat* measure, *three-beat* measure, etc., would be truer and better than "two-part" measure, "three-part" measure, etc. The word "part," when connected with "measure," refers to the space in book or on blackboard that stands for a beat. If the whole space from bar to bar stands for a measure of two beats, one half of the space stands for one beat, and the other half for the other. In the representation of Triple measure this space is divided

into three parts, in Quadruple measure into four parts, etc. So "part of measure" refers to *representation*, and not to the real measure, which is a "group of beats." Of course it is understood that the representations of measures are also called measures, but real measures in music exist, whether represented or not. Blind people appreciate measures just as well as do those who see, for they feel the mental beats, which, in their grouping, make the measures. Some have thought that "double measure" was a wrong term, because as *double* means two, it means two *measures*. That is a mistake; the double has reference to the beats; it means *two beats*. Triple measure means three-beat measure; Quadruple measure, four-beat measure, etc.

But that which should show to every thoughtful mind that our present names for measures are best, is this:

6-8 is not always "six-beat" measure; it often consists of *two* compound beats; that is, two threes, something like triplets, the dotted quarter being beat-note. It would be clumsy to say that such a measure is "a Compound two-part measure"; but "Compound double" is neat and convenient. So 9-8 is "Compound triple," and 12-8 "Compound quadruple." In all cases the compound measures have a dotted quarter for beat note. So, teachers, is it not best to continue our present names—Double, Triple, Quadruple, and Sextuple, for the simple measures, and Compound double, Compound triple, and Compound quadruple for the others? If not, what will you call the latter?

No. 5. KEY AND SCALE.

A scale is in the key of the letter which is taken as one. If C is taken as one, or basis of a scale, it is called the scale or key of C, etc.

From the lowest sound the ear can distinguish to the highest, at *every point*, there is a sound. That the sounds might be *made available*, they were arranged into *Scales*. The scales are MAJOR, MINOR, and CHROMATIC. A tune formed from a Major Scale is said to be in a *Major Key*, and a tune formed from a Minor Scale is said to be in a *Minor Key*.

A SCALE can not be in the key of a letter, for no letter is ever taken for one or for any other pitch in our system of notation, but we do not criticise that point here (see No. 2). It is using "key and scale" as synonymous terms that we call attention to in this article.

If the words "key and scale" mean the same thing in music, one might be dropped; but they do not. The "key" is a family of tones, and remains so in any possible order or combination; but there is only one way that the tones of a key become a scale. Let us look a little more deeply into this:

The word "family" is an abstract term. Alone it does not specify particular persons or tones, but it gives a clear idea of relationship. When the word "family" is applied to people, even though no particular family is mentioned, its related members, father, mother, brother, sister, etc., come promptly to the mind. So when applied to tones, the members of the tone family come just as promptly—for harmony purposes, tonic, dominant, sub-dominant, etc., and for vocal purposes, one, three, five, do, mi, sol, etc., all conveying to the mind clear ideas of tone relationship before any particular key or tone is mentioned. To show a family of people, not as an abstraction, but in the concrete, as the scientists would say, Mr. Jones' or Mr. Brown's family must appear; and to show a tone family in the same way some tones must be specified, as C, and the other members of the key of C,

or G, with its members, or F, etc., and to be *manifested* they must take some musical form. The most important forms that the tones of a key take for educational purposes are the scale, chords, and their arpeggios. But notice, the tones of a key come to these forms *already named*. “Tonic,” “dominant,” “one, three, five,” “do, mi, sol,” etc., are applied to the tones of the key *to begin with*, to describe and impress *key relationship*. Therefore it is only secondarily that they are scale names, chord names, and arpeggio names.

As all tone relationships must be in a key when tones are used for tuneful purposes, all interval names must also be there primarily, the seconds that make the scale, the thirds, fourths, etc., that make chords and their arpeggios, etc., but for educational purposes it is convenient to say “the intervals of the scale,” when speaking of the seconds that make the scale, or “intervals of the chord,” when dealing with that. But to speak of intervals that are not in the scale as intervals of the scale is altogether incorrect. There are no thirds, fourths, fifths, etc., in the *scale*; there are nothing but seconds there, and there are no chords or arpeggios in the scale. The scale being a well-defined melody itself, any succession of tones that varies from it is not in it, but all musical forms, including the scale itself, are in or of the “key.”

There is no more propriety in saying that one, three, five are tones of the scale because they occur in it, than to say they are tones of “Rosseau’s Dream” because they occur in that old melody.

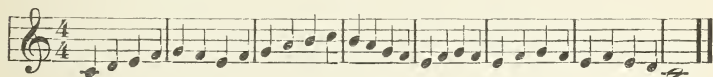
The two words “key” and “scale” are in the science. Why not give to each what belongs to it, and no more? What is gained by investing “scale” with some of the attributes of “key”? Surely nothing. All agree that the “key” is the tone family, and that all possible tone relationships are predicated of the key—yes, chromatic relationships included, for chromatic tones are temporary members of the

key, having, while in the key, names that describe their relationship, as "sharp four," "flat seven," etc.

In a diagram in one work there are six musical examples, the first headed: "All the seconds in the scale"; the second headed: "All the thirds in the scale"; the third, "All the fourths in the scale," and so on up to "All the sevenths in the scale."

There are "ninths," "tenths," "twelfths," and "fifteenthths." Are they in the scale? Just as much as all those mentioned above are, excepting the seconds. Sing or play a scale and notice whether you hear any intervals, excepting major and minor seconds, or write it and look.

The scale is a melody. It is simply one of the forms that the tones of a key may take. You would not say that there are any 3ds, 4ths, etc., in this:



and yet there are, if they are in the scale. This is another case where "scale" is invested with some of the attributes of "key." How much better to keep clearly and distinctly to what each term means, and not mix the two.

Scales are not compositions, but only a part of the material that]is used in a composition.

A *key* is not a composition, but a *scale* is. A scale is just as much a composition as is any other melody made from the tones of the key in which it is written.

Material for compositions is taken from the *key* and not from the *scale*. We do not take material from one melody or composition to make another, but we go back to the reservoir for all material.

A Dictionary says:

Diatonic, a term applied to the regular members of a scale (or key).

Which scale? There is a scale, the *regular members* of·

which are named "one," "sharp one," "two," "sharp two," etc., and, descending, "eight," "seven," "flat seven," etc. To be sure it might be said: "The diatonic scale is meant," but why leave a loophole for a misunderstanding?

The word *scale* should not be used in this definition.

The key is the great family or reservoir from which tones are taken for intervals, chords, scales, and all possible melodies and harmonies.

The terms "diatonic" and "chromatic" are predicated of the *key*—diatonic, the regular members—chromatic, the occasional members. The diatonic tones of the key in scale order make the diatonic scale, and the diatonic and chromatic tones of a key in a certain scale order make the chromatic scale. Two diatonic tones of a key make a diatonic interval, a diatonic tone and a chromatic tone of a key, or two chromatic tones, make a chromatic interval, and there are diatonic chords and chromatic chords, consequently diatonic harmonies and chromatic harmonies, all from tones of the key where they are primarily diatonic and chromatic.

"What *scale* is this tune in?" Wrong. "With what tone of the *scale* does the base begin?" Wrong. "With what *note* of the scale does the base begin?" Worse. "With what *letter* of the scale does it begin?" Still worse.



No. 6. TONE AND NOTE.

The term *SCALE* is applied to that consecutive arrangement of notes by which we proceed gradually from a given note to its octave, etc.

I SHOULD think that perhaps he means *notes*, and that he is speaking of the *representation of the scale* instead of the scale itself, were it not for his concluding sentence: "by which we proceed gradually," etc. That seems to refer to giving *tones* successively by instrument or voice, and

of all musical studies I am pretty sure he would teach harmony through the proper avenue, the ear, and not through the eye.

It is true, the accomplished musician "hears with his eyes," and "sees with his ears"; that is, when he sees written or printed music he hears it mentally, and when he hears music, if he cares to, he can mentally see the signs that would represent it. But that is only done when musical knowledge has entered the mind through the proper channel.

The scale in music, that is, the main thing, is a certain series of *tones*, something to hear. The "consecutive arrangement of notes" is but the sign to the eye of the main thing.

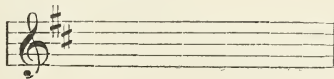
After the printed representation of the scale the teacher says:

Each one of the successive notes of the scale is called a degree.

"Degrees" refer to *pitches* of tones.*

Notes are characters of *length*. It does *look* as though notes represented pitches in the example given, as they gradually rise, but they do not. Take away the staff and no pitches are represented, although the notes remain; but take the notes away and all the pitches are there represented just as before.

The only character in our system of notation that represents the pitches of tones is the staff. Clefs, sharps, flats, etc., are staff modifiers, but do not in themselves represent pitches. It is always a line or space, natural or modified, that does that. Here, for example, are represented the pitches of the key of D major:



But notice, while all are represented, as is proven by the fact, that if any line or space is touched, the musician will tell instantly what pitch it stands for, still no particular pitch is *indicated* or *called for*. Notes do that while performing their special office, which is to indicate the lengths wanted. When the staff is prepared for a key, before any notes are put upon it, it is in a way like a harp standing silent; all its pitches are latent in its strings, so to speak, but only those are called into action that are touched. So with the staff. Its lines and spaces stand representing all the diatonic pitches of the key, but only those that are wanted are *noted* for use.

Notes are not “degrees.” There are whole notes, half notes, quarter notes, etc., but not whole degrees, half degrees, quarter degrees, etc. Technically speaking, the lines and spaces of the staff are the only “degrees” in music;* and notice how perfectly the term is there applied. It is consecutive degrees of the staff that represent the pitches of the scale (the notes point them out). It is certain degrees of the staff that represent intervals and chords (the notes point them out), and it is the intermediate degrees of the staff that are counted in reckoning intervals.

Tones as to pitch are sometimes called “degrees,” but that is still more useless. There is no condition that a tone can be in, that will not be intelligently described, either by one of its relative names, “tonic, dominant,—one, three, five,—do, re, mi, etc.,” or by one of its absolute or independent names, C, D, F-sharp, B-flat, etc. (See No. 3 for “degrees.”)

*The word “degree” may perhaps sometimes be used in teaching, with a different meaning from the above, for the purposes of explanation, but its technical meaning is a line or space.

No. 7. ONE KEY WITH TWO MODES.

Every key has a bright or Major Mode, and a dark or Minor Mode; thus every key has two modes. Each Tonic-center is the center of two such modes.

Thus, C major and C minor are not two distinct keys, but the two modes of one key.

A KEY is a family of tones having a certain membership. A different membership constitutes a different family, even though both families may have the same absolute pitch for key-tone. The keys of C major and C minor are not only different in membership, but strikingly different in the mental effects of their members, as used in tones, chords, scales, melodies, and harmonies. As well might one say that two different families of Smiths are but two modes of one family, because the fathers of the two families have the same name, as to say the two C families are one, because they have the same absolute pitch for key-tone.

This may not seem, at the first thought of it, to be a good illustration, because in the musical families the fathers, and some of the other members in both, are the same individuals (absolute pitches), but they are not the same in the all-important matter of musical effect. Take the father, for instance (the key-tone); approach him in one family and he is bright, cheery, and firm; approach him in the other, and he is, musically, a different individual; sad, plaintive, or somber. (See No. 32.)

The fact that the dominant of both keys is a major chord cuts no more figure than that both keys have the same absolute pitch for key-tone. From the chord of G major go to the chord of C major, and you are in the one key. From the chord of G major go to the chord of C minor, and you are in the other.

“Mode” is an old-fashioned word, meaning “key” or

"scale" (where people understand "scale" to mean about the same thing as "key"). "The major key with C for key-tone," means exactly the same as "the major mode with C for key-tone." There is no place where "mode" can be used musically that a modern and more common word would not be better, because better understood.

The commonly received view of this subject, that is, that in music there are two kinds of keys of entirely different structure and effect named major and minor, seems to me much clearer and more desirable than the one proposed.

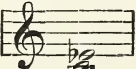
Those keys which have the most tones in common are in the closest relation to each other. The major keys nearest related to C major are G on one side and F on the other. The minor key nearest to C major is A minor, and there is great propriety in calling it the relative minor of C major, and C major the relative major of A minor. In notation both have the same signature, and in modulation the change from one to the other is closer and smoother than from C major (signature natural) to C minor (signature three flats) or to any other minor key, or to any major key, excepting those above mentioned.




NO. 8. INTERVALS.

The distance between any note and another in respect to their relative positions in the scale is termed an "INTERVAL."

"INTERVAL" is the name of two things in Music. First and most important it is the name of the *musical effect* of two tones of different pitch, heard together, or near enough together to be in the mind at the same time. Play

this  to a musician and ask him what he hears,

and he will tell you "a minor third." Play this 

and ask, and he will answer "major third." Ask him what the general name for major and minor thirds, and for seconds, fourths, fifths, etc., is, and he will answer "intervals." One meaning then of "interval," by common usage and consent, is a musical effect. Those who have thought of interval only with its other meaning, viz., difference of pitch or distance, so to speak, between two tones, and the distance or space on the staff between the two notes that represent it, may hesitate about accepting the first definition. To such I would say, that our first authority for it is the universal usage of musicians. All agree that we can *hear* seconds, thirds, fourths, etc., and that they are intervals. The second is the law governing technical terms.

Any science, art, or occupation may take words from their common meanings, so to speak, and give them special meanings, different from their common meanings. They then become technical terms. Our nomenclature is full of them. The common meaning of "accidental" is "by accident." There is not a particle of that meaning in its musical use. The musical word "natural" has no reference whatever to "naturalness," or "according to nature," but refers simply and wholly to pitch, as do "sharp" and "flat."

So "Interval," as something to hear, is no farther removed from its common meaning than are many other technical terms.

But one of its musical meanings is its common meaning. Briefly stated, the whole matter is thus:

The first meaning of interval is the musical effect of two tones—emotional. The second is the difference of pitch or space, or distance between the two tones or their representation—matters of calculation—intellectual. The first meaning is described by the terms seconds, thirds, major, minor,

perfect, augmented, diminished, diatonic, chromatic, etc. The second by the terms "half-step," "step," and "step-and-a-half."*

We do not hear steps and half-steps, for they describe the space, or distance, or, as Mr. Mathews says, the "hole" between the tones. I think there is no place where one could talk about *bearing* a step that "major second" would not be more orderly, and more in accordance with the usage of musicians as the name of what is *heard*, and for "diatonic half-step," "minor second" would always be in order. The only question would be about "chromatic half-step." Surely there must be a name for the musical effect of C and C-sharp, that does not require the use of the word half-step. "Half-step" measures the difference of pitch between the two tones, but is not a proper name for the musical effect of the two. If I am not mistaken, that interval is called "augmented prime" by some harmonists, and "chromatic interval" by others. Would not "chromatic interval" answer always, since all other chromatic intervals can be described by their other names, as "augmented second," "diminished fifth," etc., whenever they occur as chromatic intervals?

The degrees of the scale do not all include the same measure of space; for example, the interval between E and F, and B and C, is only half the interval between C and D, etc.

I think that statement would puzzle any learner not already pretty well posted on the subject. The most obvious meaning of "the same measure of space" would surely be the distance on the staff from one note of the interval to the other. As the example is given, the notes that represent the minor seconds are the same distance apart as the others.

*The "step-and-a-half"—a compound word, is *one* interval—the measure of the "augmented second," in distinction from "step" and "half-step,"—two intervals, which is the measure of the minor third.

“Is only half the interval” may not be misunderstood, but that with the whole sentence seems to me an unfortunate way to state what is meant, which I suppose to be this:

The intervals of the scale are not all alike in size. Those made by E and F and B and C are but half as large as those made by C and D, etc., or, the difference of pitch between E and F is but half as great as that between C and D, although the distance on the staff between the notes of the smaller intervals is the same as that between the notes of the larger ones.

But is that the orderly way to begin this subject? I think not. According to Pestalozzi, and all the great educators, the first watchword is, “the thing first, then the sign”; and another is, “tell the pupil nothing that he can find out himself.” According to that the pupil should *bear* major and minor seconds until he knows the difference between the two, and can tell either the moment he hears it, a thing perfectly simple and sure with everyone who has any ear for music at all, and is far enough along to commence this study. Then the seconds of the scale are examined, and the pupil finds out himself that E and F and B and C are smaller intervals than the others. Then come names and representations.

The former are called *half-steps* and the latter *steps*, termed by some authors *semi-tones* and *tones* or *minor seconds* and *major seconds*.

Here “half-steps” and “minor seconds” are regarded as meaning the same thing, and so “steps” and “major seconds.”

Steps and half-steps are no more to be compared with major and minor seconds, and other musical effects, than the tape measure which gives you the dimensions of a beautiful statue is to be considered in comparison with the statue itself; and, besides that, “half-step” and “minor second” can

not be synonymous terms. It is a half-step from C to C-sharp, but those tones do not make a minor second.



No. 9. NATURAL AND CANCEL.

What characters are used to indicate intermediate tones? *Sharps, flats and cancels.*

IN a note which follows this question and answer is the following:

If a name can be given a character that will fully define it and properly convey its meaning at all times, as "Hold," "Tie," etc., do, it seems to us the better way. This character (♯) always means to cancel the work or effect of something.

A natural cancels the effect of the sharp or flat, that has been written on that degree.

Passing by the imperfectness of the question I will confine myself to the word "cancel." I will try to show that its common meaning, as applied to the action of the character in question, is totally wrong, and that it can not be a substitute for the word "natural." I will also show that "natural" "sharp," and "flat" act alike—each simply changing the meaning of a line or space a half-step.

That my criticisms may be seen to be just, the following statements (which I think no musician will dispute) must first be seen to be true.

Sharps, flats, and naturals belong to lines and spaces, and not to notes. When the staff is prepared by clef and signature to represent a key, its lines and spaces show the pitches of that key before a note is placed upon them.

The regular members of a key are called diatonic tones. The occasional or temporary members that may come into it are called chromatic tones. Diatonic tones are shown in the signature place—a little section of the staff just at the

right of the clef. Chromatic tones are represented by accidentals, which are simply sharps, flats, naturals, etc., *elsewhere than in the signature place.*

When a staff is prepared for a key its lines and spaces are always in one of five conditions, viz. : natural, sharpened, flatted, double sharpened or double flatted, and here is a point in thorough instruction where the word "cancel" can not be a substitute for the word "natural." *One word* must be used. No science would allow a sentence there, like "No sharp or flat upon it," or, "nothing but the clef upon it." The meaning to be conveyed would be crystallized into one technical term. That was done generations ago, and it is a perfectly good word if you keep its common meaning out of the way.

The terms sharp, flat, natural, etc., refer to pitch and nothing else, and the pitch meaning in the term "natural" is just as real as it is in either of the others. To think of *naturalness* in connection with "natural" in music, is as absurd as it would be to think of something *pointed* or *cutting* with "sharp," or of something *stupid* or *dull* with "flat." It is having the common meaning of natural in mind that makes all the trouble with the word.

Notes call into action the lines and spaces that are wanted. Some lines and spaces perhaps are not wanted at all during the performance of a piece, but, as indicated by the signature, they stand there representing their pitches all through, just the same.

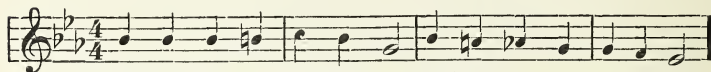
But an accidental is never used unless a line or space is to be called into action by a note, so a note is always with the accidental, and it *appears* to a superficial observer as if the *note* were sharpened or flatted, but that is a false appearance. It is the line or space whose meaning is changed, and not the note. It makes no difference what kind of a note is used.

If the above seems true to my readers we are ready to

begin the investigation. Here is precisely the same musical phrase in two keys:



Five five five \sharp five six five three five \sharp four four three three two one.
Sol sol sol si la sol mi sol fi fa mi mi re do.



Five five five \sharp five six five three five \sharp four four three three two one.
Sol sol sol si la sol mi sol fi fa mi mi re do.

Look at the first measure of the first example. You would not say that the sharp cancels anything there. No; you would say there is no character on that line to cancel. Well, look at the second example. You would not say the cancel cancels the flat, for what does "cancel" mean?—"Annul," "efface," "destroy," etc., and the flat is not effaced—it is there. No; you say it is the *effect* of the flat that is canceled. Well, what is the effect of the flat? What does it do? It makes that line stand for B-flat, does it not? If so, it must be the musical effect called B-flat that you think is canceled. Is not G in the first example a musical effect as much as B-flat in the second? Is it not exactly the same thing in the key of C that B-flat is in the key of E-flat, and is either effect canceled? Does not each continue just as long as it is wanted? Certainly if B-flat or five is canceled in the second example when a new pitch is introduced, G or five in the first is canceled when the G-sharp appears. Perhaps the principle will be more clearly seen if you look in the third measure. If the natural in the first key cancels the effect of the sharp which precedes it, the flat in the second cancels the effect of the natural, for they are absolutely the same in musical effect, and, of course, in their syllables and relative names. Here

the natural in the first key acts like a flat, and the proof is that a flat in the second does exactly the same thing.

How much more complicated the idea of canceling here is than the simple truth, which is, that the natural acts like a sharp in the first measure and like a flat in the third; but let me come to that in a more careful way.

In the first example the musical effect G starts in the signature place and runs along the line, so to speak, until it comes to the sharp. There the G or five effect stops and a new effect commences named sharp five. This effect has but a short distance to run; it stops at the bar, after which the five is resumed. I might say, in passing, that if stopping one musical effect and introducing another is *canceling*, the bar is as good a cancel as the sharp or natural, for in those two respects it does just what the accidentals do.

In the second staff the B-flat effect, which is five in this key, starts in the signature place and runs along in the same way until it comes to the natural. Here the five effect stops and the new effect named sharp five commences. This in turn is stopped by the next bar. In both cases the same process of mind and of voice is gone through with, and the same "five, five, five, sharp five," the same syllables and the same musical effect to the ear. The natural here is practically a sharp. "Why not use a sharp then?" does someone ask? Because a wise musical law says, that to avoid confusion and misunderstanding a flatted degree of the staff must be sharped by a natural, and that a sharped degree must be flatted by the same sign.

The simple and true view of this character is that it is a device to sharp where a sharp will not do, and to flat where a flat is not allowed. Whatever other function this character has, is shared by the other accidentals, for there is nothing that the natural can do in one key that the sharp or flat can not do, producing exactly the same result, in another key, and *vice versa*.

Now look at the first key again. The musical effect named F or four in this key starts in the signature place and runs into the third measure before it is stopped. To be sure, that space has not been called into action, but it has been representing F or four all the time. Now the four effect ceases and the sharp four effect comes in, but its sway is short. At the next beat it comes to a character which is appointed to *flat* that degree back to where it was.

Now look at the second example. The musical effect named A-flat (four in this key) starts in the signature place and runs in the same way into the third measure before it is stopped. There the proper character *sharps* that degree and introduces sharp four for one beat, then the proper character flats that degree back to where it was before. Just what the sharp does in the first key the natural does in the second, and just what the natural does in the first key the flat does in the second. As before, we go through the same process of mind and voice for both, and have the same syllables, the same relative names, and the same musical effect to the ear.

Now about the common meaning of "cancel." All know what it is. Let us see if it can be applied in music. Are any tones, or notes, or flats, or sharps, or their effects annulled or effaced when the new pitch comes in? No; all that has gone before, stays. Every character and every effect is just as much wanted as the new pitch is. By no stretch of the imagination can "cancel" mean keeping an effect as long as it is wanted, and then introducing a new one. If so, that operation takes place whenever an accidental occurs, and at every bar where the effect of an accidental is stopped and a line or space resumes its diatonic condition. Will not this illustration be of use here?

You are writing a letter; you look back and see a line that you do not want; you draw your pen through it; you have

canceled it; it is annulled, or effaced. But instead of that, if the line or sentence is just what you do want, and at its close you proceed to write something else, you have not canceled anything. That is just our musical case.

Another objection to "cancel" is that it looks *backward*. Notice that every accidental indicates a *coming* pitch, and that when a musician comes to one he looks *forward* to see what it calls for. He gives his whole attention to that. He has no occasion to look backward; the key, and the previous conditions just passed over, are in his mind, half unconsciously perhaps, but he does not have to give them any attention. If a person is not far enough along in music to know where he is and what has just gone before, his mental condition would have no value as authority on this subject; or, if he has such a belief in "cancel," that whenever the natural occurs he feels that he must look back and see what is to be annulled or effaced, he also would be no authority as to what musicians usually do. Is it not seen that to regard the natural as different in its action from the other accidentals, that with it there is a looking back and undoing something that the others do not do, is not only not true, but far more complicated and confusing than the simple truth that all accidentals act on the same general principle, that each one simply sharps or flats the line or space that it is on, and so indicates a coming pitch? One more important point: The teacher who wishes his pupils to be intelligent on the subject of diatonic and chromatic tones must sometimes question them about the condition of the lines and spaces of the staff, for the lines and spaces of the staff, either natural or sharped, or flatted, are the only representatives of pitches in our system. When the staff is prepared for a key, as has been said, the diatonic tones or regular members of the key are shown in the signature place, and whatever condition a line or space there is in, may be called

its diatonic condition. It is a rule that *any line or space may be sharped or flatted from its diatonic condition, to indicate a chromatic tone.* If the diatonic condition of the line or space is natural, a sharp sharps it or a flat flats it. If in the signature place it is sharped, making that its diatonic condition, a double sharp sharps it, or a natural flats it. If it is flatted in the signature, a natural sharps it, or a double-flat flats it.

This important instruction can not go on without a technical term for *every diatonic condition that a line or space may be in.* You point, for instance, to the second line of the treble staff when it is prepared for the key of F-sharp major, and ask, "What is the diatonic condition of this line in this key?" The answer will be, "It is sharped." "How would you sharp it again?" "By a double sharp." "How would you flat it?" "By a natural." Then you point to the third line of the treble staff, when it is prepared for the key of A-flat major, and ask, "What is the diatonic condition of this line in this key?" The answer would be, "It is flatted." "How would you sharp it?" "How would you flat it?" etc. Then you point to a natural line or space and ask, "What is the diatonic condition of this degree?" And you immediately perceive, as was shown in the first part of this article, that "cancel" can not be given as an answer.

Make people understand the technical meaning of "natural," and it will be found far more full and complete than "cancel" or "restoral," or any other substitute that has been proposed.

I have a little pamphlet, entitled "Cancel *versus* Natural," which treats this subject somewhat humorously, but in some respects more fully than this article does, which I shall be happy to send free to anyone who will apply for it.

(Read No. 37 in this connection.)

No. 10. SIGNATURE.

What is a signature? *The sharps or flats at the beginning of a composition to show the key or scale.*

IN regard to this use of the word "Scale," see No. 5.

Has the key of C a signature? *It has not.* What is the signature to the key of G. *One sharp.*

The musician looks at a little section of the staff, just at the right of the clef, to see what key the staff is prepared for. What he finds there is, to him, the signature of the key, for "signature" simply means sign or signs of key.

What must he see in the signature place to make sure about the key? Take the last question and answer first. Is the "one sharp" alone sufficient—simply "a flag held up," as some one poetically says, "to show the key?" Let us see. Here is a staff, we will suppose, with all of the signature-place concealed excepting the upper line with its "flag." Are you sure the staff is prepared for the key of G? You say: "No, we must see the rest of the staff." Certainly, and that shows you, does it not, that the little "flag" is not the whole of the "signature" to the key of G? It is just as important that you should see that the other degrees in the signature-place are natural, as that those affected by the sharp are sharped. You must see that *all* the diatonic tones of the key are there represented. That is so quickly done that one does not perhaps realize that he sees anything but the one sharp, until the rest of the staff is concealed. Then he realizes that he takes in the whole staff there at a glance. Therefore, the whole description of the signature of the key of G (that which must be seen) is, one degree sharped, and all the rest not affected by that sharp, natural. But science abbreviates or crystallizes into the shortest terms possible all descriptions of its facts, therefore "one sharp" is the

usual and proper name of the signature of the key of G major. All, however, using that term should know what the whole signature is.

When the staff is ready for the key of C major the musician looks, as before, into the signature-place to see what key the staff is prepared for, and what does he find? Instead of a part of the degrees natural and a part of them sharpened or flattened, he finds them all natural. Is it difficult to understand that natural degrees are just as good “signs of key” as sharpened or flattened ones?

Surely not to every open and candid mind. What then would the abbreviation of that description be? There is but one word, and that has been used for generations. With a proper understanding of its technical meaning, “natural” answers every purpose as a name for what must be seen in the signature-place when the staff is prepared for the key of C major, or, in other words, as the name of its signature.

I don't know whether to say that it would give a bad prominence to the key of C to consider that while all other keys have signatures it has none, but I know it would tend to make it different from other keys in the minds of learners, a thing which every good teacher strives to avoid. He wants his pupils to regard all major keys as exactly alike in their structure, and all equally simple, equally natural, equally melodious, and equally useful.

It is, of course, plain that all this trouble comes from trying to substitute “cancel” for “natural,” and necessarily trying to avoid the use of the latter word where “cancel” *can not* be a substitute.

For instance, a writer in this dilemma says:

“What will be the key sign with one on the added line below?” and he answers: “*The absence of sharps and flats.*”

He is partly on the right ground. He sees that “the absence of sharps or flats” *is a signature*, for that is exactly

what "key sign" means, but he does not like to put the meaning of that sentence into one word, for, if he does, that word must be "natural," as "cancel" does not at all answer there. But science comes to the relief of the situation and says one word must be used. It does not matter that here and there a person holds out against this law. It will always prevail, for it is sensible and right.

A prominent author and class-teacher says "the signature to the key of C major is not the *absence* of anything but the *presence* of something. It is not a *negative* but a *positive* thing," etc., and concludes with the statement that the staff and clef constitute the signature to that key.

It is true you can't have a signature without a clef, but it does not follow that therefore the clef is a part of the signature. You can't have a staff without paper or blackboard, or something to put it on, but staff and paper are two different things. A clef is of no use without a staff, but they are two. You can't have "pitch" in a tone without "length"; they are inseparable, but they are different things.

What is a signature—how does it come about? This way:

A composer is going to write a tune. The first thing he does is to put the staff into such a condition that it will represent the diatonic tones (regular members) of the key he is going to write in. This is done in a little section of the staff just at the right of his clef.

If he is going to write in C major the condition is ready to his hand. In some other keys he has to sharp some of the degrees, leaving the others natural; and in some others, flat some of the degrees, leaving the others natural, and very rarely he has to sharp all the degrees or flat all the degrees.

Observe that the object of his putting the staff into one of these conditions is to make it represent the key he wants. It is only incidentally and secondarily that that condition

becomes the "sign of key" or "signature," but *it is the condition of the staff in the signature place that is the signature.*

Now, our science condenses the descriptions of these various conditions into the shortest possible terms, so we have "natural" where all the degrees are natural, "one sharp" where one degree is sharped, and all the others not affected by that sharp are natural, "two sharps" where two degrees are sharped and all the others, not affected by those sharps, natural, and so on. Since the signature must show all the diatonic tones of the key, the natural degrees (if there are any) can not be left out, and never are, in the glance which takes note of the signature, although nothing is said about them.

There is nothing "negative" about these conditions. In fact, there is nothing more *positive* than all the degrees natural, or one degree sharped and the others natural, etc. To go back to the clef to find something "positive" seems to me not only unscientific but far-fetched and unnecessary. When you are looking for a signature you take staff and clef for granted. You know those two things must be there before the question of a signature or a sharp or a flat or a natural can come up. Staff and clef being there, these *other* things come along in their proper order.

A great dictionary defines Signature as follows:

The designation of the key (when not C major or its relative minor) by means of one or more sharps or flats at the beginning of the staff, immediately after the clef, affecting all notes of the same letters throughout the piece or movement.

Surely, everyone must see that lines and spaces are not letters, and that notes are not letters, also that sharps and flats affect lines and spaces, and not notes nor letters. They do not affect letters because there are none, and they do not affect notes because all their work is done before a note is used. (See No. 2 in regard to letters.)

Let it be remembered that a note or notes, sharped or flatted, as designated by the signature, continue so through the entire piece, unless the effect of these is cancelled by the use of other accidentals (sharps, flats, or naturals).

If it is a note that is sharped in the signature, what happens in the key of G, for instance, if no note touches that upper line? Does the sharp have no effect? Notes are not sharped nor flatted, but lines and spaces are, and then notes are put on them if those pitches are wanted, but the lines and spaces stand there sharped or flatted all the same, if notes do not call them into action.

But what struck me especially in this statement, is the broad and liberal way in which the word "canceled" is used. While it is not true that any musical effect is cancelled, it is true that all accidentals are precisely alike in their capacity, or rather *incapacity*, in that matter.

Speaking of accidentals an author says:

Sharps affect all the notes upon the degree of the staff upon which they are written, which come after them in the same measure.

He is partly over to the true idea; that is, he recognizes the fact that a note is not a "degree," but is upon a degree, but he is entirely mistaken in supposing that the sharp belongs to the note. The sharp is to change the meaning of the degree (the line or space) for the balance of the measure, no matter what kind of note is put there, or how many or few notes are used. (See No. 8.)

NO. 11. OF THE SIGNATURE OF MINOR KEYS.

ALL the diatonic pitches of a key (regular members) are supposed to be shown in the signature place, but in minor keys one pitch *not* belonging to the key is shown there, and one pitch that does belong to the key has to be shown by an accidental whenever it is wanted. So what is seen in the signature place is not the complete “sign or signs of a minor key.” In short, we say, however, that “one sharp” is the signature of the key of E minor, but it is with the understanding that we must look elsewhere before we can make sure.



NO. 12. WHAT THE NATURAL DOES.

When a flat in the signature is taken away by a natural the tone becomes sharp. When a sharp in the signature is taken away by a natural the tone becomes flat.

HERE is dimly foreshadowed the truth that the natural acts sometimes like a sharp, and sometimes like a flat, but how crude and full of errors is the statement. A flat or sharp in the signature is never taken away, and a tone never becomes sharp or flat in the sense of being raised or lowered. *Another tone* may be indicated, which is probably what this author means.

How much simpler is the true statement. The signature shows the regular members of the key. If a line or space is flatted in the signature, a “natural” upon it will act like a sharp; if sharped in the signature, a natural upon it will act like a flat; or, still simpler: in one case the natural will sharp it, and in the other case the natural will flat it. But in connection with this should be seen that the regular members of the key, as shown in the signature, are the diatonic tones of the key, and that chromatic tones are represented by sharpening or flattening the diatonic degrees. (See No. 8.)

No. 13. SHARP AND FLAT.

A GREAT dictionary says of the sharp:

(a) The character used to indicate that the note before which it is placed is to be raised a half step or semitone in pitch. (b) A sharp tone or note.

And of "flat":

Not sharp or shrill; not acute; as a *flat* sound.

The words sharp, flat, and natural, as the names of musical characters, and as parts of the names of absolute pitches, as C-sharp, B-flat, D-natural, etc., have not the slightest reference to the emotional character of tones, but refer simply and wholly to pitch. Tones named with the word "flat" may be so related as to be bold and joyful; tones named with the word "sharp" may be gentle and mournful, and the so-called natural tones of music may be either. Tunes, choruses, and instrumental pieces by the thousand could be adduced to prove these facts.

To say "flat keys," "sharp keys," or "natural key," meaning more sad, more joyful, or more according to nature, is wholly incorrect. Mournful and joyful may in some degree be predicated of the terms "minor" and "major," but as many minor keys as majors have sharps in their signatures, and as many majors as minors have flats.



No. 14. PITCH REPRESENTATION.

A tone can not be raised. A sharp placed before a note does not "raise the note a half step," nor "raise the tone a half step," but it causes the note to represent a new pitch a half step higher.

HE narrowly escaped being exactly right in that statement. It is the last part of it that gives a wrong idea. The note does not represent the pitch, and the sharp does not

affect the note. The line or space represents the pitch, and the sharp makes the line or space stand for a pitch a half-step higher. Then you can put one kind of note upon it, or another, or no note at all, without affecting in the least what the sharp has done.

Notes are written higher or lower according as the tones are higher or lower.

Right, if it is understood that notes do not represent pitch, but only *note* the lines and spaces that do. (See No. 2.)



No. 15. F-SHARP ON F.

Where did I use a new tone? (F-Sharp is the tone in question.) *On F.*

SINCE a "tone" is something to hear, *using* it must mean playing or singing it. How F-sharp can be played or sung on F, *which is another tone*, must puzzle a class to see. Of course that is not what is meant, but it is exactly what is said.

Yes, by sharpening F we are thrown into a new position, etc.

There is no such thing as "sharpening F," or changing it in any way. A new tone may be introduced named F-sharp, but F can not be changed. The trouble here probably comes from thinking of some line or space of the staff as being F. If so, it is an illustration of the fact that one error is sure to cause others in the course of its ramifications.

How simple and straightforward is the true phraseology in this matter:

Having properly introduced the new tone by omitting F and substituting F-sharp, the teacher asks: "Is the new tone higher or lower than F? *Higher.* Is it higher or lower than G? *Lower.* Yes, it is a pitch between F and G, and is named F-sharp." Then, at the proper time: "What pitch have we omitted that we used when C was keytone?"

What have we substituted? *F-sharp*. As the staff stands now, what pitch does it represent that we do not want? *F*. Yes; so we'll take those degrees which stand for the *F* that we do not want, and make them stand for the *F-sharp* that we do want. That is done by a character called a "sharp," placed so (on the fifth line), and such is its power when so placed that it makes the octave below it stand for *F-sharp* too. There are other lesser errors and infelicities that we do not mention.



No. 16. INTERMEDIATE TONES.

In transposing the scale we must preserve the order of intervals as in the key of *C*. To accomplish this we must reject some of the tones in the key from which the transposition is to be made and use instead certain intermediate tones.

In transpositions how do we preserve the regular order of intervals? *By using certain intermediate tones as regular tones.*

THIS is preparatory to practicing in the key of *G* after having sung in the key of *C*. I do not see why this should be called "transposing the scale," nor why there should be any talk about intervals yet; but my main point is the use of the term "intermediate tones." Intermediate tones are chromatic tones. *F-sharp*, as it occurs in the key of *G*, is not a chromatic tone, and should not be thought of as an intermediate tone. It is diatonic. It is in the key of *G* exactly what *B* is in the key of *C*. To give the idea that *C*, *D*, *E*, *F*, *G*, *A*, and *B* are the principal or most orderly or most beautiful tones of music, and that all others are intermediate or chromatic, and in some way different in character, is to make a serious mistake, and an entirely wrong impression on the mind of the learner. *C* is "intermediate" in the key of *D*; *F* is intermediate in the key of *G*; *B* is intermediate in the key of *F*, and so on.

It is far better that all the tones in music named with the words "sharp" or "flat" (as F-sharp, B-flat, etc.) should be used first as diatonic tones. All the major keys should be so learned and practiced before a chromatic tone is introduced. Then *every tone* which has been used diatonically may be used chromatically when needed, for every such tone can be in some key either as a diatonic or a chromatic tone. So all the tones of music, whether named with or without the word "sharp" or "flat," should be regarded as exactly alike in their character, and in their capacity to be diatonic or chromatic.

There is not room here to show how every tone named with the word "sharp" or "flat" can be successfully brought in first as a diatonic tone. Any who would care to see a way of doing that will find it in my little "Teachers' Club."



No. 17. TONE, INTERVAL, AND NUMBER.

The teacher gives the different intervals of the major scale of C from one to eight, explaining that one is the tonic or key-tone; that the scale is based upon this fundamental tone, and that the other intervals naturally revolve around and end upon this tone.

THIS writer seems here to use the word "interval" to mean "tone." If so, the following criticisms are in order:

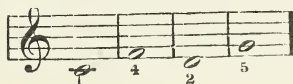
The smallest *family* consists of *two*, whether of people or tones. The largest tone-family is a "key," the smallest an "interval." One tone can no more be an interval than one person can be a family. (See No. 7.)

Would not the following statement be clearer: The teacher gives the different tones of the major scale from one to eight, explaining, etc., that the scale is based upon this fundamental tone, and that the other tones of the key naturally revolve around and end upon it? (See No. 5.)

This author goes on:

“When this is comprehended,” (that which has been explained to this point,) “begin upon key-tone one, give the next degree of the scale, and ask what was played last.”

Here “degree” is used for “tone.” Degrees are not tones; they are lines and spaces. “Degrees of the staff” is correct phraseology. “Degrees of the scale” is not. Surely “tones of the scale” is right. Why use “degree” when the true word is clearer and more direct. For instance: “When this is comprehended begin with one, then give the next tone of the scale, and ask what was played last.” (See Nos. 3 and 6 for fuller explanation of “degrees.”) Farther on is an example, with directions as follows:



After naming the number of each tone as above, the class may call it by “intervals,” etc.

We no more use numbers in music than we do letters. We use some of their *names* to name something entirely different from letters or numbers, viz.: pitches of tones—the letter names as absolute pitch names, and the number names as relative pitch names. For example: The absolute pitch *C* in this key is *one*, the absolute pitch *F* is *four*. *C* here does not name a letter nor *four* a number. (See No. 2 for fuller explanation in regard to letters.) Perhaps some who see the difference between a letter and its name may not have thought that there is a similar difference in the case of “number.” “Four,” for instance, as the name of a number, means four things or four units of some kind, but in music it is the name of one thing—a certain relative pitch in every key. In the sense of *numbering* the tones, the *second* tone in the above lesson is four, the *third* two, etc.

Perhaps the way that kind of numbering is done in intervals and chords may throw some light on the subject. In the above lesson one and four do make the first *fourth*. There the naming and numbering coincide, but the second *fourth* is made by *two* and *five*. In the tonic common chord in any key the fundamental tone and its third and fifth will coincide with the key names one, three, five, but in the dominant common chord its "first" "third" and "fifth" will be five, seven, and nine of the key, and in the subdominant chord, four, six, and eight. Were there any propriety in the use of the word "number" in the phraseology I am criticising, the word is entirely superfluous there, since the names of the pitches are shown by the numerals under the notes. Read the phrase I am criticising, and then the following. Which is more clear and concise?

"After naming each tone *as above*, the class may call the lesson by intervals."

Write out every scale in the following manner, numbering them, and committing them to memory so as to be able to tell at once what a given number is in any key.

It is not my province to criticise grammar here, but to this old friend I would hint that "write out *all* the *scales*, numbering them," or "write out every scale, numbering *it*," would be more in accordance with the generally accepted ideas of grammatical propriety. Still there would remain the error in musical phraseology, on account of which I quote the statement.

We do not number tones in music; we name them.

We no more give a tone a number in music than we give it a letter. We use the names of certain numbers and the names of certain letters to name something very different from numbers and letters. (See No. 2.)

No. 18. KEY AND MODE.

Key refers merely to the *foundation* of any recognized series of diatonic tones. Key is the index to the scale. Mode refers to a characteristic series of sounds, the fundamental of which is the key-tone. Our normal major scale constitutes the major mode; and when this is transposed above or below we say the key has changed, but the mode remains the same.

I DO not see how the old word "mode" is of any use here, for, as this author virtually says, the "scale" means the same thing—the major scale, the major mode—the minor scale, the minor mode.

"When the major scale is transposed above or below we say the key has changed, but the *mode* remains the same," meaning probably that the scale in every major key has the same intervals in exactly the same succession. Transposing the scale is like transposing any other melody. The *tune* remains the same, the only difference being that it is higher or lower.

The "key" is something more than "the foundation of a series of tones"; it is the *series itself* in any possible order or combination, while the scale is the series in only one particular way, ascending or descending. Foundation, meaning one tone, would apply fairly well to the tonic or key-tone of the key, but key and key-tone are by no means the same thing. The key is the great tone family. Its members for harmony purposes are known by such names as tonic, dominant, etc. In vocal and instrumental music the same members are known by such names as key-tone, one, three, five, do, sol, etc. (See No. 5.) "Key is the index to the scale." The scale is one of the thousands of forms that the tones of a key may take. If the key is the index to the scale it is the index to any other melody or tune that may be made from its tones. No tone, or succession of tones, differing from the scale, can be in the scale. There are no thirds, fourths, or fifths in the scale; nothing but seconds there, but all are in the family, or "key."

No. 19. METRE AND MEASURE.

From one bar to another comprises a *Measure*, and the peculiarity of the measure, as indicated by the metrical signature (numerator and denominator), constitutes the *Metre*. If the metrical signature is $\frac{3}{4}$, the piece is in three-quarter metre, because three-quarters, or the value thereof, fill the measure. The metre is always indicated by the numerator and denominator. Here are examples of Duple, Triple and Quadruple metre, with the proper accents for each.

HERE are two words that seem to me uncalled for. Although "Metre" has a similar meaning to measure, it belongs to hymnology and not to music, and is not in the least wanted in our science. Even in the above statement it must be seen to be useless, for, wherever it is used, no idea is conveyed by it that "Measure" would not include.

"Duple" is a pretty word, and means the right thing, and if names for measures were now being proposed for the first time, I would vote for "duple" instead of "double," simply because having all the measure names end with "ple" would make them more uniform. But, as "Double" is in, and answers the purpose perfectly well, it benefits no one to propose this.

A "Measure" is a group of beats. From one bar to another is but the sign of the measure, although, for short, called measure.

The metre is always indicated by the numerator and denominator.

I don't know how it may be with "Metre," but the *Measure* is indicated only by the numerator. The denominator shows the "beat note" (the kind of note that coincides with the beat).

"The piece is in three-quarter metre." It is going a great way from the simplicity of established usage to propose this phrase, which does not make the subject any clearer, and certainly is not needed.

“Metrical signature” is not the right term. “Signature,” in music, has reference only to “key.” (See No. 9.)

It should be observed that this writer says nothing about the *real* beats and measures of music, nor anything of the way that different kinds of music cause different kinds of measures by the different grouping of beats, all of which should come first. Supposing, however, that the main things have been taught, the following statements would be more in accordance with established usage:

Measures are represented to the eye by the spaces between bars. The different kinds of measures are indicated by different figures: Double measure by 2, Triple measure by 3, Quadruple by 4, etc. A figure also indicates the note that coincides with the beat of the measure (called the “beat-note”). This is placed below the figure indicating the measure, and the two make what is called the “measure sign,” $\frac{3}{4}$, for example, indicates Triple measure, with the quarter for beat-note, or three-quarters or their value in each measure. Here are examples, etc.:



NO. 20. MEASURE SIGN.

The figures at the beginning of a composition are called the FRACTION.

NO; they are called the MEASURE SIGN. The measure sign is in the form of a fraction; but “Fraction,” though a good stepping-stone while explaining, is not the technical term in music. There is no need to borrow this mathematical term for our musical purposes. We have a good one of our own.

What do we call sharps, or flats, when placed at the beginning of a composition? *Key Signature.*

Figures placed at the beginning of a composition indicate what? *Kind of measure (called measure signature).*

The word "Signature" stands by itself in music. The prefix "Key" is useless, as "Signature" refers to key, and to nothing else. The prefix "Measure" is wrong, for "Signature" has nothing to do with measure. The common name for the figures which indicate the kind and variety of measure, "measure sign," is entirely adequate, convenient, and satisfactory. It seems to the writer much better to leave the word "Signature" to its one important meaning. It is certainly unnecessary to mix it up with measure.

"What do we call sharps and flats, when placed at the beginning of a composition?" is not a good question. (See No. 9.)



No. 21. MEASURE AND TIME.

A WRITER says $\frac{2}{2}$ is double time, first variety. Double measure, half variety, would be better. The word "time," in music (tempo), has reference to movement. As the word "measure" is so well understood, and is in such constant use, there is no need of the word "time" to mean measure. "First variety," "second variety," etc., is not so direct and evident as "half variety," "quarter variety," "eighth variety," etc. The only way in which the word "time" refers to measure in music is in the phrase "beating time," and there its only meaning is keeping with the beats of the music, either mentally, or by hand or baton.

No. 22. “SHARPED.” “FLATTED.”

We often hear that a certain note is “sharped” or “flatted,” yet both words are grammatically incorrect. When the pitch is raised or lowered by a chromatic alteration it may be said to have been “*sharpened*” or “*flattened*.”

THESE is no such thing as raising or lowering a pitch by “chromatic alteration,” or in any other way. You can have another pitch, but every pitch has its—well, its own pitch, and there it stays.

Notes are neither sharped nor flatted, nor sharpened nor flattened. Those terms are properly applied only to lines and spaces. A line or space is always in one of five conditions: it is either natural, sharped, flatted, double-sharped, or double-flatted; then one kind of note or another may be put upon it. The presence or absence of the note has nothing to do with the sharpening or flattening.

Since writing the foregoing, a correspondent of the VISITOR has also raised the question of the correctness of the expression, “sharped line.” In reply, let me add the following to what is said above: It is certain that we must sometimes put a sharp on a line, and nothing seems to me more simple and direct than to call that process “sharpening the line,” and when it is done, to say the line is “sharped,”—meaning simply that a sharp is put upon it.

The word “sharp,” as is seen, is used in music both as a noun and as a verb. As a noun, it is the name of a musical character and a part of the name of certain independent tone-pitches, as C-sharp, F-sharp, etc. As a verb, it describes the process spoken of above, and is also used to describe a certain kind of performing out of tune; but that is another subject. In what we are talking about we can only “sharp” something by putting a sharp upon it, and the only thing a sharp is ever put upon is a line or space.

It is true that we can not sharp F. We can have another

pitch named F-sharp, but that opens up an entirely different subject from lines and spaces. Let us go into it with some care, and if we get at its true inwardness it will not only help here, but will throw light upon kindred topics.

Under the head of “Music,” two entirely different kinds of things are included, viz. : Tones—things to hear, and their Signs—things to see. F, G, C-sharp, B-flat, etc., are tones. Lines and spaces, sharps and flats, are signs. Now, while you can put one sign on another, as a sharp on a line, because both are things to see, you can not put a sharp on a tone—because one is a thing to see and the other a thing to hear. So while it is sensible enough to talk about sharpening a line, it is utterly absurd to talk about sharpening F, because F is a tone. Does anyone think that F is the name of a line? If so, its name is sometimes F-sharp, sometimes F-double-sharp. Use different clefs and it would have at least twenty other names. (See No. 2.) No, that line has but one name; but the thing named *fifth line* may be so modified by clefs, and by being sharped or flatted or double-sharped or double-flatted, as to be the sign or representation to the eye of many different tones.

The things in music named C, D, F-sharp, B-flat, etc., can not be seen. It is only their signs that are seen.

Is it correct to speak of sharpening a line or space? Is not F-sharp or A-flat a tone entirely independent of F, or A?

That looks as if he thinks F is a line and A a space, and that I supposed I was sharpening F when I was preparing a line to represent the tone F-sharp, and that I was flating A when I was preparing a space to represent the tone A-flat. I assure him that I had no idea of such a thing as sharpening a tone or flating a tone, but I had a very clear idea of putting a sharp on a line to make it represent the tone F-sharp, and of putting a flat on a space to make it represent the tone A-flat.

No. When we put the sharp on the line *we are not doing anything to F*. That tone is “way off” in another world—the world of sound—while we, with our signs, are in the world of sight. When we put the sharp on the line, or, to speak more concisely, when we sharp the line, it stands silent, waiting for somebody with voice or instrument to produce the tone it calls for. For short, we say that that line, so modified, is F-sharp, but it isn’t: it is only its sign. Just as we say this—\$1.00—is one dollar, but it isn’t; it is only the sign of a dollar. It calls for it, perhaps, if it is on a bill that you ought to pay.

Is not F-sharp the name of a particular pitch, without sharpening anything?

Certainly. But you can not represent that particular pitch without sharpening something.

Literally, is anything made flat or sharp?

I do not think those would be good words to describe what is done, but the fact remains that flats and sharps are put upon lines and spaces, and, in accordance with scientific usage, there must be some concise way of stating that fact when it occurs.

It would appear that a line or space can not be flatted or sharped any more than a letter (normal pitch-name), and that such an expression tends to convey a wrong impression to the pupil.

I hope it does not appear to the reader of this article that a line or space can not be sharped or flatted, and sincerely trust that no wrong impression will be made by the foregoing on the mind of any pupil. All I wish to say further, is, that we do not use letters in our musical notation, unless the clefs be considered letters. (See No. 2.)

No. 23. ACCIDENTAL. CHROMATIC ALTERATION.

The word “accidental” is also employed incorrectly in reference to a foreign tone not contained in the scale in which a composition is written. In such cases it would be preferable to speak of the foreign tone, in a general way, as a chromatic alteration, or, be specific and say, *b-flat*, *g-sharp*, *e-natural*, for it is not reasonable to suppose that the composer used the tone accidentally.

THE writer of the above seems to think that “accidental” is *intended* to be used in music with something of its common meaning, and for that reason suggests a way of avoiding its use.

That is a not uncommon error, and leads to just such unfortunate phrases as “chromatic alteration,” which is not only unnecessary, but incorrect. The “foreign tone” is just as liable to be a diatonic tone of a neighboring key (in a modulation) as to be a chromatic tone in the key in use, and when it is a *diatonic* tone, a *chromatic* alteration to represent it would indeed be a strange contradiction in terms.

An accidental is not a *tone*; it is simply a sharp, flat, or natural elsewhere than in the signature place—something to see—nothing to hear. The accidental sometimes helps to represent a chromatic tone, and sometimes a diatonic tone (the latter in modulation). Of course the accidental is never used “by accident.” He who thinks that is the meaning intended, will be in constant trouble. It would be as if one thought the *intention* of “natural” in music is to mean that one tone, or one scale, or one key has more “naturalness” than another, or that “sharp” means more shrill or high, and “flat” more dull or low. Such thoughts lead the teacher astray in his explanations, to the confusion of his pupils.

Only the *technical* meanings of these words should be thought of in their musical use. It is not of the least consequence what their other meanings are. (See No. 25.)

The word "accidental" *is*, therefore, employed *correctly* when speaking of the character that aids in representing the "foreign tone." It is the duly appointed and only character that changes the meaning of the line or space so that it will represent the pitch wanted. A chromatic or a diatonic alteration of the *meaning* of the line or space will be the result, but the "accidental" is the cause.

For it is not reasonable to suppose that the composer used the tone accidentally.

Nor is it reasonable to suppose that he thought of such a thing while using the word "accidental" with its musical meaning.

In the scale in which a composition is written.

A composition is written in a "key," not in a scale. There is nothing in the scale in the way of a melody but the *scale*. One tune or melody can not be in another.

The chromatic alteration is merely the *means* of arriving at the new key or location, etc.; and again:

Every chromatic alteration does not necessitate a change of key.

Evidently in this author's mind "chromatic alteration" means the use of an accidental. Accidentals often indicate diatonic tones. When that is the case, I should suppose "diatonic alteration" would be preferred. It is certain that in such cases "chromatic alteration" is not correct. I can not imagine why such an expression should be used when the usual phraseology is so much clearer and better. Here it is:

"The accidental is merely the means of arriving at the new key." (Here is where the accidental indicates a diatonic tone.) "Every accidental does not indicate a change of key." (Here is where the accidental would indicate a chromatic tone.)

A recent writer in the VISITOR suggests "Incidental" as a substitute for "Accidental." Certainly the common meaning of Incidental for musical purposes is not so far out of the way as is that of Accidental. The character referred to is surely one of the *incidents* in the notation of a piece of music where it occurs, but it is never an *accident*. Still, it does not fill the bill. Its common meaning is neither distinctive nor descriptive. We should have to give it a technical meaning, and that is all we have to do to Accidental.



No. 24. RAISING A TONE.

This is produced by raising the root of an essential seventh chord one chromatic step.

YOU can not raise a tone; you can have another a half step higher. "The seventh chord" is the phrase you would use if you were numbering successive chords and had arrived at the seventh one. The usual phraseology, "the chord of the seventh," is better. The phrase "one chromatic step" applied to a pitch a *half step* higher is strange indeed.

This author says that the Plagal Cadence embraces the harmonies of the subdominant and tonic, and there he is right; but he follows with "in other words, with the chords of the fourth and first degrees," and there he is not so clear as if he had said "the chords of four and one," for "four" and "one" are the key names of the fundamental tones of those two chords, while degrees are not the names of tones at all, but of lines and spaces. (See Nos. 3 and 6.)

No. 25. TECHNICAL TERMS.

The technical names applied to each note of the scale should also be understood. The first note of a scale is called Tonic; *i. e.*, keytone; the second, Supertonic, the next degree above the Tonic, etc.

AMONG musical terms, some are “technical,” that is, used with a meaning more or less different from their common meanings; some are used *with* their common meanings, and some are “to the manner born,” that is, their musical meaning is their common meaning, and they are only technical when used elsewhere than in music. For example, “tone” is at home in music; it is not technical there; but when used in painting, as the “tone” of a picture, it is technical in that art; and in medical parlance, as the “tone” of the system, it is technical there, thus having different meanings for its different uses.

I do not think the above terms should be called “technical.” They belong primarily to music, with perhaps one exception, “dominant.” But that is not important. I would suggest a very small “don’t” for that—it is saying that those are names of the different *degrees* of the *scale* that requires capitals. (See No. 5.)



No. 26. TONALITY.

In its general application this (Tonality) refers to our eighty-eight chromatic tones; to the twelve major scales; the several forms of the minor scale; to our system of related and unrelated keys; and the science of Harmony. But the application in this book is to our impression of the key at any particular point, and the relationship between the new and old fundamental. A few examples will set this forth in plainer light.

THEN comes a musical example of six measures; the first measure in the key of C major, the second in the key of D minor, the third and fourth in G major, and the fifth

and sixth in C major. These *simple facts* he expresses in the following language:

The tonality in the first measure is plainly that of C major. At (b) the tonality is recognized as that of D minor even before the resolution on the third beat. The chord at (d) destroys the impression of D minor because *b*-natural does not occur in that key. The discord at (e) establishes the tonality as that of G. The concord at (f) does not affect the tonality; but when the F-sharp is canceled at (g) the key of the dominant disappears, and the ear anticipates the return of the original tonality as at (c).

While the above might be stated in simpler language, this author has one phrase exactly right: “because *b*-natural does not occur in that *key*.” But I do not see why he did not say “because *b*-natural does not occur in that *scale*,” since he generally uses the word “scale” for “key.” (See No. 5.) “But when the F-sharp is canceled at (g),” etc. F-sharp is not canceled—it is there, and its effect is there just as long as it is wanted. Then a new pitch is introduced. Stopping one effect and introducing another is not canceling. If it were, every accidental cancels whenever it appears. So does the *bar* that follows an accidental. (See No. 8.)

“The key of the dominant disappears,” etc. That phrase might perhaps answer if the facts were in the mind of him who uses it; but learners should not be subjected to that risk. There is no such thing as “the key of the dominant.” Keys are not founded upon dominants, but upon tonics. That which *was* dominant in one key may become tonic in another. Of course that is the meaning here.

But the first sentence in this quotation calls for special remark. It is where he speaks of “our eighty-eight chromatic tones.”

Every tone in music, that is, every absolute pitch, is sometimes diatonic and sometimes chromatic, excepting those named with the words double sharp and double flat, which are not used as diatonic tones to any extent. (See No. 34.)

C is just as liable to be chromatic as diatonic, and C-sharp is just as liable to be diatonic as chromatic.

If this author means that all the tones in music named with the words sharp or flat, as F-sharp, B-flat, etc., are chromatic, and that C D E F G A and B and their octaves are not chromatic, he makes a grave mistake, for the latter are just as often chromatic as the former.

Whether he is speaking only of the key of C major, or that there are eighty-eight chromatic tones in each of the great tone-families, it is an unfortunate expression, for it must give a wrong impression of the facts to a learner. If he had said "Tonality refers to all diatonic and chromatic tones; to the twelve," etc., he would have stated clearly what I suppose he means.



No. 27. AUGMENTED PRIME AND MINOR SECOND.

What name is given to the interval from one to sharp one (C to C-sharp, etc.)? "*Prime.*"

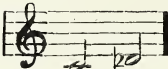
TWO tones of the *same pitch* constitute a "prime." C and C-sharp make what is called a chromatic interval, sometimes called an augmented prime. Then the form of the question is not right. *From C to C-sharp is a half step; from six to seven of the harmonic minor key is a step-and-a-half.* The *musical effect* of the first interval is "augmented prime," and of the second "augmented second."

This questioner is right in some previous questions, as "What is the size of the interval from one to two of the harmonic minor scale?" "*A step.*" That is right. "Size," or "difference of pitch," or "distance" (so to speak), in fact, all the measurements which we do not hear, but calculate, are well described by the terms "step," "half step," etc. If he had continued, and asked what musical effects do those

tones produce heard near together? the proper answer would be, *a major second*.

There is nothing more orderly and beautiful in our science than this plan of describing the two things which are called by the one name of "Interval,"—which things are *the difference of pitch* between two tones (of different pitch), and the *musical effect* of the two when heard together. (See No. 7.)

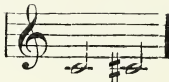
Those who mix these terms, or think they can use the emotional terms for measurements, get into difficulties, one of which may be shown as follows:

"What interval is this—

"*A minor second.*"

"How far apart must tones be to make a minor second?"

"*A minor second.*"

"What interval is this—

"*A chromatic interval or augmented prime.*"

"How far apart must tones be to produce this interval?"

Here he is in trouble. He can not say "minor second." No musician would admit that, and if the man is sensible he now sees the necessity for a different term for measuring purposes.

How clear and logical the true way is.

"How far apart are the tones that make a minor second?"

"*A half step.*"

"How far apart are the tones that make a chromatic interval?"

"*A half step.*"

"Why then are they not alike?"

"*Because in their use, especially in harmony, they produce entirely different musical effects.*"

I might add that the tones of a minor third and of an augmented second are the same distance apart, while their effects are totally different.

The following remarks upon the effect that relationship produces not only upon tones but upon intervals, may be of use in this connection.

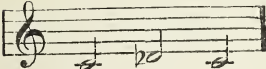
Give a tone alone upon the piano—middle C for example. It has no particular emotional effect. Add the E-flat next above it and it instantly becomes plaintive and mournful. Play C and E together and both become cheerful. So it is seen that single tones are effected in their emotional character by relationship. Let us see how it is with Intervals.

Play the minor third again— Plaintive. Now

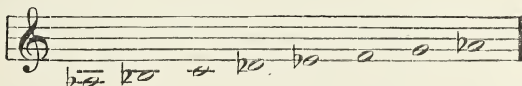
add the major third below— and every particle

of sadness disappears from the *minor third*.

Play in the key of C major a moment to get the key of A-flat out of the mind, and then play C and D-flat thus—

 That interval has a somber effect.

Now let it be put into relationship with the other seconds of the scale in A-flat major—



and all its somberness disappears. All this is to call attention to a very important thing in music, viz.: the different effects produced by *tone-relationship*, as exemplified and illustrated in the *tone-families*, from the smallest (the Interval) to the largest (the Key).

No. 28. CLEF.

ONE of the great dictionaries defines the clef thus:

A character used in musical notation to determine the position and pitch of the scale as represented on the staff.

Observe, this definition connects the clef with the *scale* primarily, and secondarily with the staff, while the fact is that the clef determines the pitch representation of the *staff*, and then the scale or any other succession or combination in the key of C major may be represented upon it by *noting* the lines or spaces wanted; but the entire work of the clef is done before a note is used; and were any other key than C major to be represented the clef alone would not “determine the pitch,” other staff modifiers (sharps or flats) would have to be added. So neither the word scale nor note has any proper place in the definition of clef.

But a still greater defect in the definition is that it omits the reasons for clefs. Were the object of the clef only “to determine the position or pitch of the scale,” one clef would be enough, but each clef makes the staff represent the pitches of a certain voice or instrument range or compass as *much as possible by its long lines and spaces*. The Treble clef, for instance, makes the second line stand for G, and so keeps the pitch representation of the ordinary voices of women nearly within the five lines and their spaces. So the F, or Base, clef makes the staff represent the lower voices of men, and the C, or Tenor, clef makes it represent the higher voices of men with hardly an added degree.

Clefs, sharps, flats, naturals, double sharps, and double flats are *staff* modifiers. They have to do *only* with lines and spaces. Observe the difference between representing a pitch and indicating it. When the staff is prepared for a key by clef and signature, all the pitches of the key are *represented*,

but none are *indicated*. Notes indicate the pitches wanted while showing how long to make them. See No. 1.



No. 29. TENOR CLEF.

Some have commenced using what they call the Tenor clef, but as the lines and spaces in the Tenor part have the same names as in the Treble and Alto parts, there is not the shadow of a necessity for another clef, and using one puts a wholly unnecessary obstacle in the path of learners.

THESE are two reasons for the Tenor clef, one very important and the other appreciable. The first is making the staff represent the exact pitch of Tenor voices instead of an octave higher as the Treble clef does. The second is that the Tenor part may be quickly distinguished from the Soprano. Instead of being an obstacle in the way of learners, which it never is, it often removes one.



No. 30. TRANSPOSITION.

When any other than C is taken as tonic, what is the change called? *Transposition (or from one key to another)*.

THIS is misleading. "Transposition" takes place only when the same tune, phrase, exercise, or scale is given in one key and then in another, or when a piece is given in a different key from the one in which it is written. Giving one piece in one key and then taking another tonic and forming a new key with different exercises is not transposition, and simply going from one key to another should not be so called.

No. 31. ON REPRESENTING KEYS. KEYTONE.

IN an excellent work, which is refreshingly true in its use of musical terms, there is one thing to which I say "don't." It is applying "do" to different degrees of the staff, and having lessons really in different keys, without any signature.

The proper signature does not hinder the practice in the least, and may be used without explanation, just as minor and chromatic scales can be practiced to advantage before their structure is explained. The teacher calls attention to, and names, the signature, and says it will be explained later.

What is the advantage of this? The pupil gets accustomed to the looks of the signature, and quickly associates it with the location of the syllables (so to speak). For instance, with four sharps on the treble staff he connects "do" with the first line, with one sharp "do" on the second line, etc. There is then nothing to unlearn or change, later. He will simply go deeper into the meaning of what he has become accustomed to the appearance of.

What is the objection to my friend's plan? The opportunity is lost for the important matter of associating certain appearances of the staff with certain applications of the syllables, a new condition comes in when the signature is given, the whole has a new look and there is a sort of setback, and all without the slightest advantage or compensation to the learner.

My friend objects to keytone, because he says all the tones of a key are keytones. No, all the tones of a key are not "keytones." All are "members of the key," or "tones of the key," but only one is "keytone." That is the *right* of a technical term, to have a separate meaning when it is used to apply to one particular thing. The science has a perfect right to apply that word to one tone of the key, and

there is not the slightest danger that any other member of the key will be called the keytone.

All the tones and signs of music are *natural*, or at least one is just as natural as another, but that does not prevent the word "natural" from being technically applied to certain things in the science and not to all.



No. 32. MENTAL EFFECTS OF TONES.

When a singer reads the notes by remembering what each line or space means, he is said to be reading by ABSTRACT PITCH. When a singer reads the notes by computing the distance from each note to the next, he is said to be reading by RELATIVE PITCH.

DOES not a singer read by having the characteristics of a pitch in his mind when he sees its sign, instead of remembering a line or space, or computing a distance? In other words, is it not the mental effect of tones, as the tonic-solfaists call it, by which we are guided? For instance, when we see the sign of five of a major key, does not the peculiar dominant character of that pitch come to our minds, or if it is the plaintive six, or the restless seven, or the reposeful home-tone—is it not its mental effect in each case that is our guide? Analyze it in your own case and see. Of course this would not apply to beginners. They have first to learn the mental effect of each tone of a key—an interesting and useful work, easily done.

No. 33. PULSE AND TONE-COLOR.

Ordinarily, in each pulse-group, especially in the smaller clusters, there is one pulse which stands out more prominently in the mind as the principal pulse of that group.

WE have long been in the habit of defining beats as mental pulsations, and have long used "pulse" and "pulsations" as good stepping-stones to the ultimate word. Why Mr. Curwen substitutes the word "pulse" for "beat" I do not know, unless it was to mark a distinction between the real beats of music and the motions of the hand or baton which manifest them. If so, it is an entirely unnecessary proceeding, for there is no more confusion in using the word "beat" for both things, than the word "crescendo" for a certain dynamic effect and for the two diverging lines which constitute its sign, and there are many other cases in music where one word serves as the name of the thing and its sign without the least confusion. "Pulse" is a good word and means the right thing, but is no better than "beat." Notwithstanding the small "don't" attached to this (only because it introduces an unnecessary word into our system) it may prevail—time will show. It is universally used by the sol-faists in England, where it originated, and they are so great a power that whatever they do is sure to have a large following.

"Tone-color" is much affected by some teachers and writers. It is a picturesque expression, and there is no more harm in applying the word "color" to tone than in applying the word "tone" to color in a picture, if we needed to do so, but we do not. "Quality" is what is meant, and is a far better word for classification and clear distinction. "Clear quality," "somber quality," "sympathetic quality," etc., convey much more forcibly the ideas wanted than "clear color," "somber color," "sympathetic color," etc.

Possibly in describing the effect of a large orchestra the word "color," or "coloring," might help, but I do not see why "quality" would not always be more definite when we come down to particulars. It is a pretty word, and seekers for novelty will naturally be attracted by it.



No. 34. DOUBLE SHARP AND DOUBLE FLAT.

If we wish to make any degree of the staff represent a tone one full step above its natural tone, what character do we use ?

"A double sharp."

And if the same distance below, what character ?

"A double flat."

THE above is totally misleading. Here are the facts:
The double sharp is a device to sharp a degree of the staff already sharped, or that would be sharped if the signature were given where it is used. The double flat is a device to flat a degree of the staff already flatted, or that would be flatted if the signature were given, etc.

It is certain that if there had never been any occasion for sharpening a line or space already sharped, there never would have been a double sharp; and if there had never been a need for flattening a degree already flatted, there never would have been a double flat. The idea that the double sharp and double flat were invented to change the meaning of a natural degree of the staff a whole step at once is utterly subversive of all accepted ideas of tone relationship and representation, as I think I can show.

Every tone properly used in music stands in key relationship to its neighbors. It is either a diatonic or regular member of the key that is being used, or it is a chromatic or temporary member. In a major key it is either one or sharp

one, two, or sharp two, or flat two, three, or flat three, and so on up to seven, or flat seven. It *must* be one of these pitches. There are no such things as double sharp one, double flat three, etc. There is no such a thing as double sharpening or double flattening in the sense of changing the meaning of a degree a step, *where the pitches of a key are fully represented.*

There are two ways of representing keys on the staff, one by a signature, and the other by accidentals; but observe the important difference between the two ways: When the key is represented by a signature all its regular members are shown, whether they are wanted or not, but when the key is represented by accidentals, only those tones of the key that are wanted are shown, the others have to be “understood.”

Take the following example for illustration, where a modulation goes from the key of C to the key of E:



F-sharp is not shown there because it is not wanted, but it is there potentially, and is in the musician's mind as two of the key of E, so when he sees the double sharp he knows it is the orderly way to represent the sharp two that the music requires. He has nothing to do with the F-natural in that modulation. It is not in existence for him.

To think of F-natural, which is not diatonic there because it is in the signature at the beginning, or to think of it because it is flat two in the key in which the modulation is,

and that the office of the double sharp is to “double sharp” it, and so change the meaning of that degree a step at once to get the sharp two, would be a folly that we can hardly conceive of in a person with any musical knowledge at all.

Custom, as is seen above, permits the staff to make false representations in modulations. Observe right in the midst of the key of E (four sharps) F-natural and C-natural appear as diatonic degrees (according to signature). This they are not at that point, so the staff there makes a false representation.

Just so whenever the double sharp or double flat appears on a natural degree, a false representation is made. Why? Because, practically, the double sharp and double flat are always used for chromatic tones, and a chromatic tone is never truly represented in any other way than by sharpening or flattening a *diatonic* degree. Thus a natural line or space can not be where those “double” characters are used, and it ought not to be so thought of, even if the key in which they occur is not “expressed” but has to be “understood.”

Here the staff makes a true representation of the above musical strain :



It just occurs to me that the word “double sharp” may mislead some by causing them to think that it means *sharpening twice*. It means no such thing. It is simply a name given to a character that sharps *once*, like any other sharp, but it has a different name from the other sharp and a differ-

ent appearance because of its peculiar office. If it *appears* to sharp twice, it is like the sun's rising, an *apparent truth*, but not a real truth; and it is so because of the nonrepresentation on the staves of all the tones of the keys in which the double sharp occurs, as I have shown. So, of the appearance that the double flat flats twice, the same general principle holds true.

The double sharp can not be used in the keys of C, G, and D. It first finds a place in A major (three sharps) where it can be used only in representing sharp six. In E major it is used for sharp two and sharp six; in B major for sharp two, sharp five, and sharp six, and so on. It is not used to represent a *diatonic* tone in any major key in common use. The first one in which it could be so used is G-sharp (eight sharps), where F double sharp would be seven.

As a diatonic tone it would, of course, be represented in the signature place.

I have never seen this key used in music, but building up its signature in the orderly way shows in a clear and pleasant fashion the true use of the double sharp. First the seven natural degrees are sharped, and then the first degree that was sharped must be sharped again, thus:



Observe the signature is built up by gradually adding sharps, and when it comes to the double sharp, that is added precisely as the others are, and with the same effect, for it is not *two sharps*, but one. It is made peculiarly, and named peculiarly, because its office is to sharp another sharp (so to speak).

Going on to nine sharps, ten sharps, eleven sharps, etc.,

would be but sharpening again others of the already sharped degrees of the staff. If anyone thinks, after he has placed the seven sharps, that he could take away the first one and substitute a double sharp, and so make that degree of the staff represent a pitch a step higher to begin with, he would make a grave mistake. Such a proceeding would entirely subvert the beautiful order of our signature system.

The first minor key in which this pitch could appear as a diatonic tone is G-sharp minor (five sharps), where F double sharp is seven; but it will be observed that that degree is already sharped in the signature place.

In conclusion, in all the major keys in common use, wherever there is a pitch named with the word "double sharp," it is chromatic, and there is a diatonic pitch a half step below it, and wherever there is a pitch named with the word "double flat," it is chromatic, and there is a diatonic pitch a half step above it. This is true whatever may be the staff representation.

A good deal of discussion has recently taken place regarding the compound characters that always follow the double sharp and double flat ($\sharp\sharp$, $\flat\flat$). It began by the statement that those characters had no names, and has been continued by the effort to find one for each that would be satisfactory. I will not discuss the merits of the names which have been proposed because I am satisfied that a plan which has been suggested by at least three teachers of prominence will, if adopted, do away with the present awkward form of the characters and render new names unnecessary.

The plan is to let a sharp alone follow the double sharp, and a flat alone follow the double flat as a means of changing back the line or space affected to its diatonic condition.

At first I thought that plan would not do, it seemed so simple, but reflection convinces me that it would work perfectly well. Let me illustrate:

Three, five, \sharp five, six, five, three, one, two, three.
Mi, sol, si, la, sol, mi, do, re, mi.

There can be no doubt as to what that second accidental means. A natural before it would not make it more clear; on the contrary, it would give it a confused look. A natural there is as unnecessary as in the changing of a signature. It is far simpler just to let one signature displace another without the intervention of naturals.

Here the naturals are used:

Mi, do, ti, do, do, do. Mi, do, re, mi.

Re, mi, re, do, sol, mi, re, mi, re, do.

Here the naturals are dispensed with:

Sad - ly the winds in the dark fo-rests sigh,

While o'er the mea-dows the light breez-es fly.

Whether this arrangement be considered entirely arbitrary, or whether the clef may be considered as ending the effect of the previous signature, by no possibility can the plan cause any misunderstanding or confusion.

So with the sharp after the double sharp, and the flat after the double flat; but a curious fact is shown in connection with those characters. Every accidental simply changes the meaning of the line or space on which it is placed a half step if the key is represented; that is, it only sharps or flats. We are accustomed to the fact that the natural does sometimes one and sometimes the other, but here the sharp which follows the double sharp *flats*, and the flat which follows the double flat *sharps*.

I hope these plans will be adopted, that we may get rid of those awkward compound characters; then if the double flat can be made into one character as the double sharp is, the whole matter will be in better form.



No. 35. KLANG, KEY GROUP, AND A CENTRAL KEY.

A MODERN author suggests the German word *klang* as a substitute for "tone," because, as he says, "it expresses more fully what we hear in the compound of elementary or partial tones which collectively constitute a musical tone."

It is self-evident that whatever constitutes a "tone" is included in the meaning of that word. If, in our musical work, there were need of making more prominent the idea of the partial tones, or overtones, or harmonics of which a tone is composed I can see that the suggestion would have some force; but that is not the case, and I fail to see where, in his after writing, this author uses the word *klang* that "tone" would not have fully expressed what he wished to say. A sentence or two from a paragraph a little farther on in his work confirms my point.

In music a klang is always thought and heard in connection with other klangs, and, therefore, always occurs in some positive relation which determines its exact pitch, and gives it definite character or meaning. A separate tone is a tone out of relation, and means nothing musically. Music at all moments occurs in some one key, hence the primal relation of a tone is its key relation. Thus a tone has no definite character in the mind until it is related as a *key-klang*.

Read “tone” for *klang*, “tones” for *klangs*, and “tone of a key” for *key-klang*, and you will get the full meaning of the true and excellent statement which is here made.

This author uses “key-group” for key. Since a “key” is “a family of related tones” it is of course a kind of “group,” but it is not necessary to say either “key-family” or “key-group,” for the word “key” alone means all of relationship that either word implies. Were it desirable to add a word to “key” to further indicate its meaning, “family” would be far more suggestive of relationship than “group.”

Where a person thinks that “key” and “key-note” or “key-tone” mean about the same thing, “key-family” or “key-group” would in his mind have some “reason to be,” but this author does not think so, judging from the following questions:

How many klangs are there in a key? What are the relative positions of the Tonic and the remaining key klangs?

Beside the seven principals, a key group contains what I call the Ten Primary Intermediates.

Then follow the names of the diatonic and chromatic pitches that constitute the key of C major.

The tones thus specified do not complete the full number of tones that occur in a single tone-stratum. There are ten other tones in a stratum, which I call the Ten Secondary Intermediates.

Then follow their names, thus: g^{\times} , $b^{\#}$, c^{\times} , $e^{\#}$, f^{\times} , abb , bbb , cb , ebb , fb . (Why d^{\times} and dbb are left out does not appear.)

Thus a single tone-stratum contains twenty-seven tones in all, namely, the seven principals, the ten primary intermediates, and the ten secondary intermediates. When I speak of a full tone stratum it will be understood that these twenty-seven tones are referred to as a unit.

Middle C is the central tone of the system.

The natural key of C is the central key of the system.

Every key centers in and radiates from the central stratum. Thus the twenty-seven tones in the central stratum are twenty-seven Tonic centers of twenty-seven keys.

Many of these keys are not employed, owing to their complex notation.

If I understand this author, his "primary intermediates" are simply the chromatic tones of a key. If so, what he calls "secondary intermediates" are nothing more. All the pitches so named are simply the "primary intermediates" or chromatic tones of certain keys. The following statement will treat the whole subject more fully:

Every tone in music has a name which describes it as a separate tone—*independent of relationship*, and a name which describes it in its relation to other tones. The former is called its *absolute name* and the latter its *relative name*. The absolute names of tones are the same as the names of certain letters with, in some cases, the addition of the word sharp, flat, double sharp, or double flat. Relative names are tonic, dominant, key-tone, one, three, do, sol, sharp four, flat seven, and names of that kind.

Following are all the independent or absolute pitch names in use: A, A#, Ab, A*, Abb, B, B#, Bb, Bbb, C, C#, C*, Cb, D, D#, D*, Db, Dbb, E, E#, Eb, Ebb, F, F#, F*, Fb, G, G#, G*, Gb, Gbb—thirty-one in all. (Observe, these spoken names are not letters, and the letters which are their written names are not here used as the names of letters. See No. 2 for a fuller explanation.) All these tones are precisely alike in their capacity for being diatonic or chromatic, or, in other words, principals or intermediates. Those named with the words double sharp and double flat are not used and repre-

sented as diatonic tones for the reason that the same results can be reached by a simpler notation, but there is nothing in the nature of such tones to prevent such use. The scale or any other melody can be sung with C double sharp for key-tone as easily as with C or D. In many keys in use C-sharp is a chromatic or intermediate tone. In *just as many* C is chromatic or intermediate, and so with all the other tones excepting those named with the words double sharp or double flat.

It follows that all the tones in common use are equal in respect to prominence or lack of prominence. No set takes precedence over another set permanently. All take turns in being principals, and all take turns in being intermediates. Those named with the words “sharp” and “flat,” as A-sharp, B-flat, etc., are just as often principals as those with the shorter names. Look through the keys of G, D, A, E, B, F, B-flat, E-flat, A-flat, D-flat, and G-flat, and notice which are principals, and which intermediates; or, to use the scientific terms, which are diatonic tones and which chromatic.

A key can be fully and clearly manifested by its seven regular members, or diatonic tones, but it may have other temporary members (chromatic tones) which, when used, take their place in the family having names given them which describe their relationship. Here are the names of all—permanent and temporary; in other words, diatonic and chromatic of a key: one, sharp one, two, sharp two, three, four, sharp four, five, sharp five, six, sharp six, seven, flat seven, flat six, flat five, flat three, and flat two.

From the thirty-one independent tones, whose names are given above, all the keys in common use are made. Take any one of the independent pitches (excepting those named with the words “double sharp” and “double flat) for key-tone and notice what will make “sharp one,” “two,” “sharp two,” etc., “seven,” “flat seven,” etc. You will

notice that no pitch named with the word "double sharp" will come into the major keys of C, G, and D, and no pitch named with the word "double flat" will come into the major keys of C, F, and B-flat. These keys will be full and complete with all their diatonic and chromatic members without the pitches named with the word "double." The first major key in which a "double sharp" will occur will be A, and the first in which a double flat will occur will be E-flat.

If one could find a tone that is midway in the great scale of tones, from the highest to the lowest, appreciable by human ears, that might be called the central tone of the system; but as ears vary in their power to discover the property of pitch (that which distinguishes a tone from other sounds or noises) in extremely high and low tones, it would be difficult to come to an agreement; and if found, it would have no significance for musical purposes. It would be precisely like its neighbors in its capacity for use.

Since every key includes the highest and lowest tones usable, all are alike in extent or compass; and no one can be central in the sense that the others are around it, or emanate or radiate from it.

In studying keys in connection with our system of notation, C is taken first, simply because its notation is the simplest, and not because it is more central, or simple, or natural; certainly not because it is the primary key, the others emanating from it as secondary keys.

Let me repeat: There are thirty-one independent pitches extending by their octaves to the utmost bound of pitch perception. All major keys made from this material will be found exactly alike in structure and importance.

No. 36. STAFF SPACES.

No. 36 is an endeavor to make more clear some points which did not receive sufficient illustration in No. 1, judging by what has been said on the subject since that article was written and printed in the *MUSICAL VISITOR*, a year or two ago.

The dialogue form is chosen, that both sides may be fairly stated.

Some repetition is unavoidable in bringing up the old points for fresh illustration.

THIS is a subject which, like Banquo's ghost, "will not down." Teachers continue to discuss it, and write about it in the musical papers with as much ardor, apparently, as when it was first broached, although, as yet, they do not seem to be in sight of an agreement. Here is a conversation, having this subject for its theme, which may be of some use, as it brings up some new points, or rather treats some old points in a new way.

A begins by saying: "Common space is everywhere—on the surface of a sheet of paper, on a board, on a wall, on the ground, in the air, in short, all around us, but there is no musical space until a horizontal line is made. Take this sheet of blank paper and draw a horizontal line in the center of it thus, and some of the common space that was on the paper is turned into two musical spaces."

B: "By what authority do you say that that line has turned common space into musical space?"

A: "The universal usage of musicians, who say that with one line there are three places on which to write notes: on the line and above and below it, and two of these places are spaces—musical spaces if notes are written upon them."

B: "How much common space is turned into these musical spaces, as you call them?"

A: "That depends upon how large the note is to be that is to be used. The strip of musical space which the line makes must be wide enough to hold the note well."

B: "But there is no boundary on one side of that space to show where the musical space leaves off and the common space begins."

A: "That is not important—you can tell near enough. You will see exactly how wide the outside spaces are as soon as you have two lines, for the outside spaces will be just the size of the space between the lines. Then, as you go on building up the staff, each new line places a visible boundary where the mental boundary was. The lines you use are continually turning strips of common space into musical space, and that process goes on just the same when you enlarge the staff with short lines, ending always with the kind of space with which you began."

B: "But what right have you to say that the space just outside of the outer line belongs to the line?"

A: "Why, the line creates it. It is never there without the line, it is always there with the line. How two things can belong to each other more than they do I can't imagine."

B: "Then you would argue that if the line belongs to the staff, the space it creates belongs to the staff also."

A: "Certainly; that is the natural and rational deduction from the facts."

B: "Well, let me state the case as a majority of musical people view it: with one line, *no space*; with two lines, one space; with three lines, two spaces; with four lines, three spaces; and with five lines, four. That constitutes the entire staff, outside of which there are no staff lines and spaces."

A: "What are they called then—the outside places that musicians use to write notes upon?"

B: "Added lines and spaces."

A: "Added to what?"

B: "To the staff."

A: "Added to the staff, but do not become a part of it."

B: "Why, yes, I suppose that is the way it is."

A: "Is the space next above the fifth line an added space?"

B: "Really, no, but theoretically, yes. That is, we agree that the staff shall end with the line, and so we class that space with the short lines and spaces."

A: "Then that is the first added space above."

B: "Well, we don't say 'added space above,' but simply 'space above.'"

A: "But you call the first space that is really added the second added space, do you not?"

B: "Yes."

A: "Well, if there is a *second* added space, there must be a *first*. Which is it?"

B: "I see what you are driving at, but what's the harm? Can't people play, or sing, or read music just as well while taking this common view of the subject?"

A: "Yes; but are you contented, for purposes of teaching and for the credit of our system as a science, that our theory should be complicated where it might be simple, contrary to the usages of musicians where it might be in agreement with them, and false where it might just as easily, yes, much more easily, be true?"

B: "That is a severe arraignment of the statements I have made, if you apply it to them."

A: "I do. Taking the points in the order of their mention, which is more complicated and puzzling and which more reasonable and clear of the following statements? Here is the first: 'Write a scale upward, beginning on the middle line of the staff, and you go beyond the staff into something that is not the staff—lines and spaces, to be sure, but they do not belong to the staff—added to the staff, to be sure, but not so added as to become a part of the staff.'

"That, to the clear mind of a child or the trained mind of a scientist, would be like saying: A man found he needed

more rooms in his house, so he added a story to it; but he said the story he had added did not belong to the house. He could go up into the rooms that had been added, but they were not a part of the house."

B, laughing: "He could use the rooms just as well as if he had said they were a part of the house."

A: "Yes, but his neighbors would consider him crazy, all the same."

"Now the other statement: 'You write a scale upward, beginning with the third line of the staff. You find the ordinary five-line staff is not large enough, so you add a line to it to enlarge it, only you use a short line because more long lines would confuse the eye. When you have written it, your scale is entirely on the staff, not a part of it on and a part off. When the man wanted more rooms, he simply *enlarged* his house.'"

B: "Then the staff may have six, seven, or eight, or more lines."

A: "Certainly."

B: "Supposing you enlarge the staff downward by adding three lines, the lowest line would be the first line of the staff, wouldn't it?"

A: "Yes, but that would not be its name. Its staff-name would be the 'third line below.' The names of the lines and spaces would never vary, though the staff may, or, I should say, is constantly varying in size.

"Now to the next point: You make the statement that the staff has no space outside of the five lines. The child and the scientist, standing by, see the musician put the sharp of a signature on one of the outer spaces and then write notes on both of them, just as he does on the inner ones, and the child, who thinks sharps and notes must be written on the staff, says: 'What is he putting things out there for, if that is not a part of the staff?' It is all strange and puzzling to

him, but the scientist says promptly: 'Here, your theory and practice do not agree; you must either take those outer spaces into the staff or quit using them, if you wish your science to be consistent.' Then you reply: 'Can't we use those spaces when we need to, and still consider that they do not belong to the staff?'

"B: 'Perhaps you can. Musicians seem to be able to do extraordinary things in that way, but why you should adopt so far-fetched and unreasonable a theory to get out of your dilemma when the obvious and simple one is at your hand I can not imagine. What is there in the nature of the case to prevent a space instead of a line from being the outer degree of the staff? Surely the universal usage of musicians makes that appear natural and reasonable, and what violence is done to reason and common sense to consider that the staff takes in all the lines and spaces that are being used—long or short?'

A: "Now, per contra, you make the other statement: 'The staff includes all the spaces that the five lines make, the two outside as well as the four inside, and if it is not large enough you add more lines and spaces.' Then the musician writes where he pleases, the child is not puzzled by anything contradictory, and the scientist says: 'Now you are right. That statement agrees with the accepted musical usage, simplifies the whole matter, and is scientific as well as rational.'

A: "The third accusation against the common view is that it calls the first space that is really added the 'second added space.' The child says: 'Why don't you call it the first added space, if it is the first?' The scientist says: 'What kind of a science is this that permits such a falsity on the face of it?' And he retires in disgust."

B: "Well, how would you remedy it?"

A: "The way is most simple and obvious, and has been

mentioned many times: name the long spaces as you do the long lines, just as they really occur—first, second, third, fourth, fifth, sixth. These pertain to the permanent staff. Then the short lines and spaces—the occasional visitors—exactly as they occur: first added line, first added space, or, better still, omitting the word ‘added,’ first line above, first space above, second line above, second space above (or below), etc.”

B: “Above what?”

A: “Do you expect me to say ‘above the staff’ I can’t do that, for they are a part of the staff whenever they are used, ‘above’ or ‘below,’ simply indicating the direction in which the staff is being enlarged.”

B: “Such a change in naming the spaces as you propose would make a great deal of trouble.”

A: “Only to those who have the false naming in mind. Beginners would not imagine that there could be any other way, if they are taught correctly about the outer spaces.”

In passing, it might be mentioned that Webster’s definition of “Staff” is, “The five lines and the spaces on which music is written.” This, of course, includes the outer spaces.

I hope what has been said will increase the number who will subscribe to the following statements:

The staff is an aggregation of lines and spaces, long or short.

There is no such thing as a musical line or space out of, or separate from, a staff. It is only a musical line or space by virtue of being a part of a staff.

In the representation of a piece of music, a note, or a sharp, or a flat, or a clef has no signification, unless it is on a staff. Therefore, wherever one of these characters is, there is a staff, or a line or a space of it.

No. 37. NATURAL AND CANCEL AGAIN.

This addition to No. 9 seems to be required, judging by the correspondence on this subject which has taken place since that article was written. It is hoped that this will be a satisfactory explanation of the points in question.

IN the song "I Come to Thee," whether in the lower key or the higher, the singer who reads music has precisely the same thoughts when he comes to the sharp four, whether it is represented by the sharp or by the natural.

He begins by seeing what the signature is, and that being in his mind *he does not look back*; he looks *ahead*, and gives sharp four in the one case just as in the other, simply because it *is* sharp four, represented differently in the different keys in accordance with the orderly laws of the science. Here is the example:

1

3 4 #1 5 8 3 6 5
I come to thee when morn - ing breaks.

2

3 4 #1 5 8 3 6 5
I come to thee when morn - ing breaks.

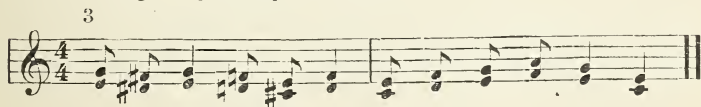
To teach that the process of mind should be different in the second case from the first would be unscientific and untrue, and consequently harmful to the progress of the learner.

Since it is a fact that the natural in the second case acts like a sharp (and there can be no doubt of that), it is much easier to banish the idea of *naturalizing* and connect the idea of *sharping* with the word "natural," than to banish the idea of *canceling* and connect *sharping* with the word "cancel," but that would have to be done if "cancel" were

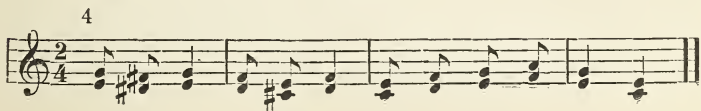
adopted. That there is no canceling done by the natural that is not done by the other accidentals and the bar, has been many times shown. In fact, there is no "canceling" done by any musical character when each character produces the effect wanted and continues it as long as it is wanted—stopping only when a new effect is to be introduced. To think of that character as making the degree on which it is placed represent a pitch a half step higher or a half step lower is *simplicity*. To think of it as undoing, annulling, or effacing something that has been done, is *complexity*, as well as falsity.

P. S. Since writing the above this occurs to me: The sharp in the first example makes the space on which it is placed stand for F-sharp as far as the bar. There the bar acts exactly as a natural would if it were placed there instead of the bar—the measure being longer. The bar makes the space stand for F again—a pitch a half step lower. So in the next example the natural makes the space on which it is placed stand for A as far as the bar. There the bar acts exactly as a flat would if it were placed there. It makes the space stand for A-flat again—a pitch a half step lower. Yet I think no one will say that the bar does any canceling.

The following example will make this more clear. A composer writes this phrase, for instance. He thinks of it first as being in quadruple measure:



Then he sees that it is not properly in quadruple measure, but in double, and he writes again:



Now the bar stops those two spaces from representing F-sharp and D-sharp and makes them represent F and D (pitches a half step lower), exactly as the naturals do in the first example, but it does no canceling. Each measure is exactly what is wanted. Nothing is effaced or annulled. The bar simply *stops* the staff from representing F-sharp and D-sharp, and makes it represent F and D. If continuing one pitch as long as it is wanted and then introducing another is *canceling*, then the sharp, flat, and bar do it just as often as the natural does. I venture to say that those who use the word “cancel” do so with *wrong* thoughts about the action of the natural, for, as is said above, it is much harder to connect the true idea and action of that character with the word “cancel” than with the word “natural.”

Probably one trouble is that many think of a sharp, flat, or natural as belonging to a note. It no more belongs to a note than a bar does. It affects only a line or space—in an extended way as a signature; in a more limited way as an accidental.

It undoubtedly does appear to the superficial observer as if the accidental belongs to the note before which it is placed, and as if the natural does something in the way of canceling or restoring which the other characters do not—that the boundary of the staff is a line, etc. But in all these cases a little investigation will show that the truth is not in the appearance.

These remarks are not intended to imply that all who take the apparent for real truths are poor musicians (see Preface), but it is certain that they would be better *teachers of the science of music* if they would take the trouble to look into these matters and right themselves where they are wrong.

No. 38. OF THE TONALITY OF CHROMATIC TONES.

For our closing chapter we can not do better than to quote from recent editorials in *THE MUSICAL VISITOR* on the above-named subject.

The discussion began by a correspondent, who, in answer to some statement that had been made, said: "The student was right. The chromatic scale has no tonality. Its notation is a matter upon which very few authorities agree." The discussion then went on as shown by the larger and smaller type in what follows:

ACCORDING to a standard writer, tonality has reference to the relationship of tones in a key, and to the recognition by the ear of the keytone. He says of a series of modulations: "The tonality in the first is that of the key of G major; the tonality in the second is that of E minor," etc. He might as well have said: "The first modulation is in the key of G major, the second in E minor," etc.; for that was plainly all that was meant. But that being the meaning of "tonality," it must include the relationship to each other of all the tones of the phrase or piece having tonality. Now, while a chromatic tone can not be a keytone, it can have a well-defined relationship in a key, for every key consists of regular members called diatonic tones, and occasional or temporary members called chromatic tones. Sharp-four and flat-seven are as well-defined members of a key when they are used in it, as four or seven, and their relationship to other tones as readily recognized, and the diatonic and chromatic tones of a key when given in scale-form—making the chromatic scale—lead from keytone to keytone (one to eight, or *vice versa*) as surely as do the tones of the diatonic scale.

Therefore if "tonality" refers to what belongs to a key it must include the occasional chromatic tones used in it, as well as its chromatic scale, for every key has its chromatic as well as its diatonic scale.

The question at issue is not whether the diatonic tones of a key—one, two, three, four, five, six and seven, have tonality, but whether chromatic tones, when introduced into a piece of music, have that place and recognized relationship in the key which brings them properly under that head.

This being the case, when F-sharp and B-flat are so used in the key of C that they lead, the one to the key of G, and the other to the key of F, they are not in the discussion, for then they are not chromatic tones—they are diatonic tones of those neighboring keys. F-sharp is seven in the key of G, and B-flat is four in the key of F. A modulation in each case has taken place, and, we might say in passing, if “we lose for a time the original tonality” we find it in the keys to which we go. Tonality is not confined to one key; it changes with every modulation, and exists wherever a key is manifested, however short the manifestation or modulation.

It is only when tones not belonging regularly to a key are so used that they do not cause a change of key that they are chromatic tones.

2

rit. e dim.

In the above example F-sharp is sharp four. It and all the other visitors are here chromatic tones, for they cause no change of key or modulation. But notice: each has not only its name and place *in the key*, but its character and relationship are as well defined to the musician's mind as are those qualities in its diatonic neighbors.

What musician does not recognize and feel the relationship and effects of the sharp-four and sharp-two near the beginning, and, later, those of the sharp-one, sharp-six, and sharp-two, and last, that of the beautiful flat-six, all producing a richness and variety in the harmony not obtainable by diatonic tones alone?

Seeing that to be true, and that musicians have given *key-names* to these desirable visitors, who can doubt that they are *members of the family* while in use, and, as such, have tonality?

That tones, both diatonic and chromatic, have tendencies in their progression is plain. Seven naturally leads to eight, four to three, sharp-four to five, (or, in a modulation the same tones might be seven to eight), etc. But while some of the diatonic members of a key have considerable repose (the keytone complete repose), chromatic tones have none. They must move. Their tendency is toward a tone of some repose or through a series to the keytone. But as passing tones, each has its key-name, its key relationship, and its musical effect perfectly recognized by the musician. This is illustrated by the following series—to the musician's ear unmistakably in the key of C:

3

The musical notation consists of three staves in 4/4 time, all in the key of C. The top staff is a treble clef with a melody line. It begins with a quarter rest, followed by eighth notes: C4, D4, E4, F#4, G4, A4, B4, and C5. The middle staff is a treble clef with a bass line of chords. The bottom staff is a bass clef with a bass line of chords. The chords in the middle and bottom staves are: C4 (quarter), D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), and C5 (quarter).

The foregoing is the chromatic scale ascending, but harmonize these tones and they are out of the discussion, for the chromatic scale at once disappears. In its place is a series of short modulations, in which *there is not a chromatic tone*. All are regular members in good standing of the keys they represent.

4

The chromatic scale, as such, can not be harmonized, but as every tone in music may be used diatonically or chromatically, tones that were chromatic in the chromatic scale may become diatonic by a different treatment. Although this point is out of the discussion, we will say, in passing, that the tonality of the first chord is that of C major, the next two give us D major, the next two E major, the next two F, the next two G, the next two A, the next two B, and the last two C, the starting point.

The question is asked: "How can there be tonality in such a series of sounds?" The answer is: There is tonality wherever key relationship is felt and a keytone recognized, however short the phrase or modulation. The dominant and tonic chords of any key given in that order

are sufficient to establish that key in the mind, all the more strongly if the first chord is the dominant seventh chord, as in the foregoing modulations.

* We do not feel called upon to criticise here such expressions as “keys of the dominant and subdominant,” “raised sixth and seventh,” and “accidentals from other keys,” but they are open to criticism.

* Comments upon such expressions may be found in other parts of this book.



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